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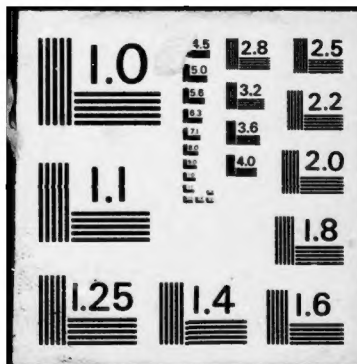
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USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK  
VOLUME 64. B-52G AIRCRAFT,  
NEAR AND FAR-FIELD NOISE

AEROSPACE MEDICAL RESEARCH LABORATORY,  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

NOVEMBER 1975

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Volume 64



# USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK

Volume 64  
B-52G AIRCRAFT, NEAR AND FAR-FIELD  
NOISE

NOVEMBER 1975



Approved for public release; distribution unlimited

AEROSPACE MEDICAL RESEARCH LABORATORY  
AEROSPACE MEDICAL DIVISION  
AIR FORCE SYSTEMS COMMAND  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433

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FOR THE COMMANDER

*Heinz E. von Gierke*

HENNINO E. VON GIERKE  
Director  
Fluidynamics and Biomechanics Division  
Aerospace Medical Research Laboratory

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limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Far-field data measured at 19 locations are normalized to standard meteorological conditions and extrapolated from 75-8000 meters to derive sets of equal-value contours for these same seven acoustic measures as functions of angle and distance from the source. Refer to Volume 1 of this handbook, "USAF Bioenvironmental Noise Data Handbook, Vol 1: Organization, Content and Application", AMRL-TR-75-50(1) 1975, for discussion of the objective and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc.

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## **PREFACE**

This report was prepared by the Biodynamic Environment Branch, Aerospace Medical Research Laboratory, under Project/Task 723104, Measurement of Noise and Vibration Environments of Air Force Operations.

The author gratefully acknowledges Mr. John Cole for his assistance in preparing this report, Mr. Robert England for his assistance in acquiring the raw data, Mr. Henry Mohlman and Mr. David Eilerman of the University of Dayton for assistance in the mechanics of data processing and Mrs. Norma Peachey and Mr. Mike Patterson for assistance in typing and preparation of the graphics.

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## INTRODUCTION

The USAF B-52G Stratofortress is a strategic bomber-type aircraft powered by eight J57-P-43WA turbojet engines. The aircraft was manufactured by the Boeing Company and the engines by United Aircraft, Pratt and Whitney Division.

This volume provides measured and extrapolated data defining bioacoustic environments produced by this aircraft during ground runup operations. Such data are essential to evaluate ear protection requirements, limiting personnel exposure times, voice communication capabilities, and annoyance problems associated with ground runups of the B-52G aircraft.

This volume is one of a series published by the Aerospace Medical Research Laboratory (AMRL) under the same report number (AMRL-TR-75-50) as a multi-volume handbook that quantifies the noise environments produced at flight/ground crew locations and in surrounding communities by operations of Air Force aircraft and aerospace ground equipment. The far-field, community-type noise data in the handbook describe the noise produced during *ground operations* of aircraft, aerospace ground equipment, and other ground-based equipment or facilities.

Volume 1 of this handbook discusses the objectives and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc. Volume 2 provides a method and data for adjusting the handbook's far-field noise data, which are for standard meteorological conditions (15°C temperature, 70% rel humidity, 0.760 meters Hg barometric pressure), to derive comparable data for other meteorological conditions. *Refer to Volumes 1 and 2* (references 1 and 2) for such information because it is not repeated in other handbook volumes.

A cumulative index lists those aerospace systems contained in the handbook, and identifies the specific volumes containing each type of environmental noise data available (i.e., inflight/flight crew and passenger noise, near-field/ground crew noise, far-field/community noise). Volume numbers are assigned sequentially as individual volumes are published. This index is periodically updated as individual volumes are published and is available upon request from AMRL/BBE, Wright-Patterson AFB, OH 45433. Organizations on the distribution list for the handbook will automatically receive a copy of each updated index.

Direct any questions concerning the technical data in this report and other handbook volumes to: AMRL/BBE, Wright-Patterson AFB, OH 45433; AUTOVON 78-53675 or 78-53664; Commercial (513) 255-3675 or (513) 255-3664.

1. Cole, John N., *USAF Bioenvironmental Noise Data Handbook Volume 1: Organization, Content and Application*, AMRL-TR-75-50 (1), Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, 1975.
2. Cole, John N., *USAF Bioenvironmental Noise Data Handbook, Volume 2: Procedure to Evaluate Effects of Non-standard Meteorological Conditions on Far-Field Noise*, AMRL-TR-75-50 (2), AMRL, WPAFB, OH, 1975.

## **NEAR-FIELD NOISE**

### **MEASUREMENTS**

AMRL acquired near-field noise data on the B-52G aircraft during ground runup operations of its turbojet engines and aerospace ground equipment. For these tests the aircraft was located on a concrete runup pad at Edwards AFB with no significant reflecting surfaces in the vicinity except the ground plane. Table 1 gives the surface meteorological conditions and the four engine, aerospace ground equipment, and power conditions. The ground-crew chief selected power conditions and near-field locations generally used during routine maintenance or engine runup for preflight checks.

At each near-field location a test engineer randomly moved a hand held microphone in and around each location, probing all areas where a crew member's head would normally be located. He recorded all of the noise samples on magnetic tape. During analysis of each sample, he determined the root-mean-square sound pressure using a 4- or 8-second integration time to derive a power-averaged level for each location. Figure 1 shows the eight near-field locations where ground crews are usually located for maintenance and/or preflight checkout operations. Estimates of noise levels at other locations in the near-field are difficult since the noise source is spatially distributed, i.e., not a point source. The noise levels at near-field locations can vary widely depending upon relative distances from each noise source (intake noise, exhaust noise, panel resonances, internal engine noise through the engine wall, etc.).

Table 1 lists the numeric/alphabetic designators used on the data pages in this report to identify the measurement locations and test conditions. For example, the designator 1/A means ground crew location 1 and test condition A.

### **RESULTS**

The measured data presented in Table 2 define the sound pressure levels (SPL) produced by the B-52G aircraft at the eight ground crew locations. This table includes the overall, 1/3 octave band, and octave band levels. From these data one can calculate the variety of measures given in Table 3, which are widely used to assess the effects of noise on personnel and their performance.

All near-field data are for the meteorological conditions at the time of test but are valid for all typical airbase meteorology because of the short sound propagation distances involved.

TABLE 1

MEASUREMENT LOCATIONS AND TEST CONDITIONS  
FOR NEAR-FIELD NOISE MEASUREMENTS

B-52G Aircraft, Ground Runup, Edwards AFB, CA  
14 September 1972  
Tail #30399

*Ground Crew Location*

1	Operation MA-1A
2	Flow Check
3	Forward Hatch Check
4	FLG Wheel Chock
5	MD-3 Connector Removal
6	MD-3 Cable Gathering
7	Air Exhaust Check Engine #6
8	Rear LG Wheel Chock

*Aircraft Engine (and AGE) Operation*

A	Engine #4 Start, MA-1A and MD-3 Operating
B	Engine #4 at 90% RPM, Other Engines Idle Power, MD-3 Operating
C	All Engines Idle Power, MD-3 Operating
D	All Engines Idle Power

*Meteorology*

Temperature	15.6 C
Bar Pressure	.701 M Hg
Rel Humidity	39 %
Wind	Calm

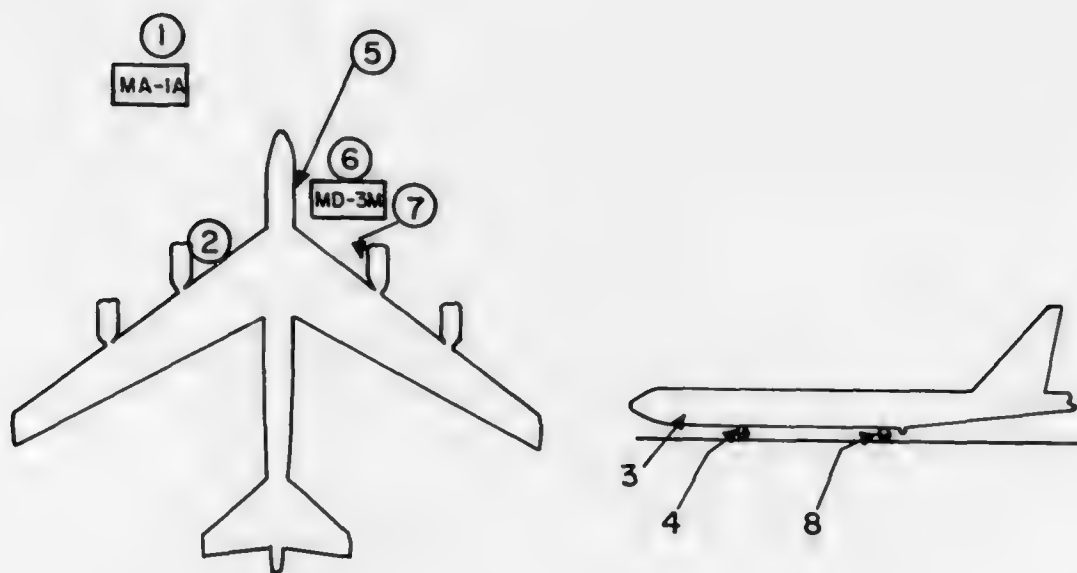


Figure 1. Near-Field Measurement Locations at Pad 15, Edwards AFB, CA

## **FAR-FIELD NOISE**

### **MEASUREMENTS**

AMRL acquired both near and far-field data during a 1- 2-hour test period, thus keeping similar meteorological conditions. Figure 2 shows the ground runup pad, ground cover, aircraft orientation and the 19 microphone measurement sites on a semicircle. The center of the 75 meter radius semicircle used in surveying the J57-P-43WA engines was on the ground directly below the intersection of the aircraft's centerline and the plane passing through both inboard engine pods' exhaust-nozzle exits.

Table 4 provides cockpit readouts of engine characteristics (% RPM, fuel flow, etc.) for each power setting used in the far-field tests. Also listed in this table are the surface meteorological conditions during data acquisition.

All microphone measurement sites are in the acoustic far-field of the source where the sound wave-fronts spherically diverge and the noise source may be regarded as a point source.

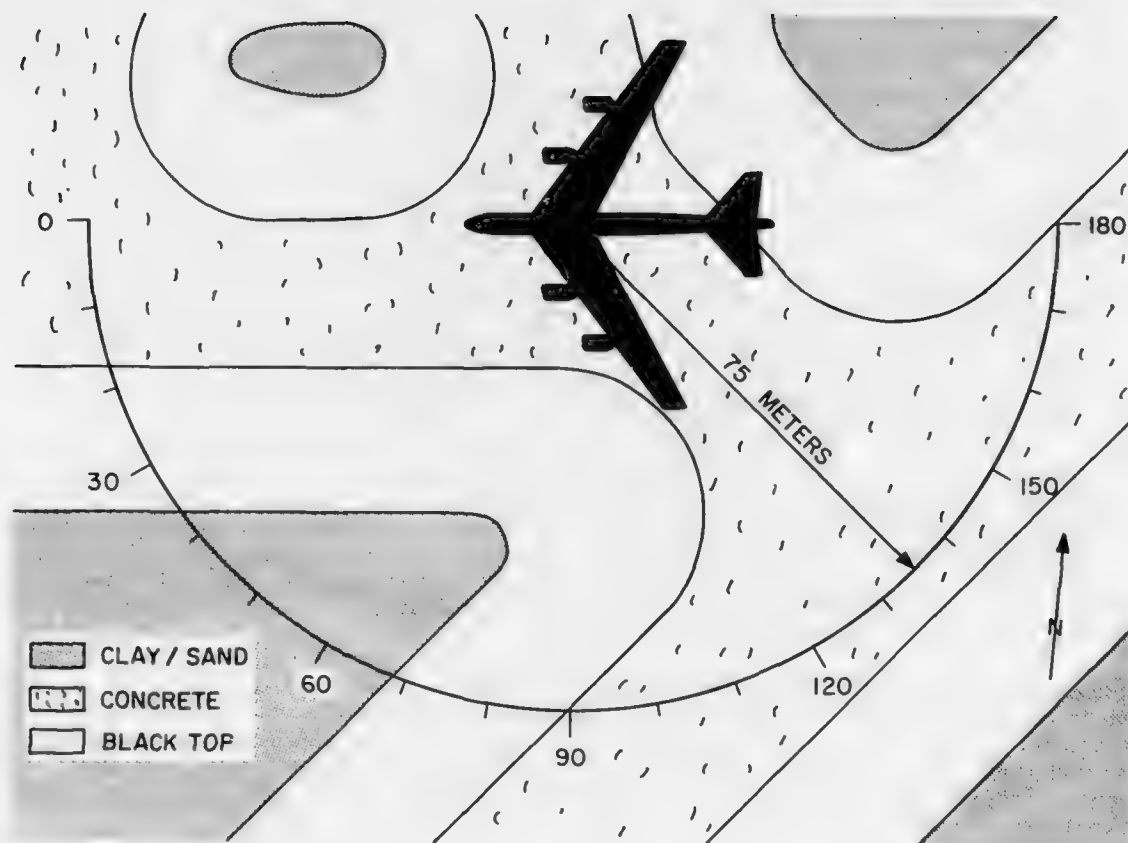
A portable microphone/tape-recorder system was used to sequentially record the noise at each far-field location. The microphone was attached to a hand held pole, pointed at the source (0° angle of incidence) and vertically scanned from 0.5 to 3 meters for a period of 5-10 seconds during data acquisition at each microphone location. These samples were then time-integrated to derive a root-mean-square sound pressure level. Vertical scanning and time-integrating together reduce anomalies frequently present in data acquired by a fixed height microphone.

### **RESULTS**

Table 5 lists the overall and 1/3 octave band SPL measured at the far-field locations under meteorological conditions at the time of the test. Data in all other figures and tables are based on these levels. These data were normalized to 100 meters distance and standard meteorological conditions (15°C temperature, 70% relative humidity, 0.760 meter Hg barometric pressure) and used to derive the graphic data in Figure 3 which provides a compact summary of the far-field noise characteristics of the B-52G aircraft in a standard format.

Figure 4 and Table 6 present two basic acoustic measures, the acoustic power level and the directivity index, respectively. The acoustic power level describes the power radiated by the source as a function of frequency. The directivity index is a standard acoustical engineering measure that describes the geometric way in which the source radiates this power as a function of both frequency and angle from source. These basic source measures are primarily of interest for acoustical engineers and noise generation/control specialists.





**Figure 2. Far-Field Measurement Locations at Pad 15, Edwards AFB, CA**

Figures 5 through 11 are sets of equal noise contours describing seven different measures of noise as a function of angle and distance from the source for standard day meteorology. They are respectively, overall sound pressure level, C-weighted sound level, A-weighted sound level, perceived noise level, speech interference level, permissible exposure times for personnel and octave band sound pressure levels.

No data are presented at the 170 and 180 degree locations for idle power and at the 160, 170 and 180 degree locations for the remaining power settings because of turbulent air flow behind the aircraft.

Test personnel performed noise surveys during quiet periods when the background noise was minimal, e.g., early in the morning when no other aircraft or engine test stands were operating.

Volume 2 of the handbook describes the influence of meteorology on far-field noise environments, and provides, if required, the factors necessary to adjust the handbook's standard meteorological day data.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)									
2 1/3 OCTAVE BAND									
NOISE SOURCE/SUBJECT: ( OPERATION: )									
B-52G AIRCRAFT ( )									
GROUND CREW ( )									
NEAR FIELD NOISE LEVELS ( )									
LOCATION/CONDITION									
FREQ (HZ)	1/A	2/B	3/C	4/C	5/C	6/C	7/D	8/D	
25	89	106	87	83	86	86	90	89	
31.5	83	110	88	80	90	87	91	84	
40	83	111	91	93	92	90	93	93	
50	87	111	94	95	96	99	96	97	
63	86	115	99	100	103	108	97	99	
80	84	118	91	98	94	95	93	97	
100	92	121	97	100	96	103	100	97	
125	96	123	105	97	100	110	100	100	
160	98	124	96	97	95	107	99	100	
200	97	126	94	94	93	103	99	96	
250	93	126	95	97	99	109	98	97	
315	96	125	96	98	101	109	100	100	
400	100	127	97	100	102	104	103	111	
500	94	126	96	100	100	102	103	101	
630	92	126	98	101	100	101	103	101	
800	90	125	97	100	99	100	102	102	
1000	87	125	105	104	108	107	111	103	
1250	87	124	110	107	111	108	111	104	
1600	87	123	104	101	104	104	105	101	
2000	92	124	103	102	103	103	102	103	
2500	91	122	104	103	103	103	102	103	
3150	94	121	105	105	106	105	109	107	
4000	96	119	104	106	107	106	111	111	
5000	100	120	100	100	101	100	103	103	
6300	103	119	97	103	100	98	102	106	
8000	113	122	99	111	104	101	105	114	
10000	112	120	94	100	98	96	104	103	
OVERALL	116	137	115	116	117	119	119	119	
LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.									

IDENTIFICATION:

OMEGA 3.2

TEST 72-045-002

RUN 01

02 DEC 74

PAGE F1

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)									
2									
OCTAVE BAND									
NOISE SOURCE/SUBJECT: ( OPERATION: )									
B-52G AIRCRAFT ( )									
GROUND CREW ( )									
NEAR FIELD NOISE LEVELS ( )									
LOCATION/CONDITION									
FREQ (HZ)	1/A	2/B	3/C	4/C	5/C	6/C	7/D	8/D	
31.5	91	114	94	94	94	92	96	94	
63	90	120	101	103	104	108	100	103	
125	101	127	106	103	102	112	104	104	
250	100	130	100	101	103	112	104	103	
500	101	131	102	105	105	107	107	111	
1000	93	129	111	109	113	111	114	108	
2000	95	128	108	106	108	108	109	106	
4000	102	125	108	109	110	109	113	113	
8000	116	125	102	112	106	103	109	115	
OVERALL	116	137	115	116	117	119	119	119	

IDENTIFICATION:

OMEGA 3.2  
TEST 72-045-002

RUN 01

02 DEC 74

PAGE J1

TABLE: MEASURES OF HUMAN NOISE EXPOSURE										IDENTIFICATION:
3										
NOISE SOURCE/SUBJECT:										
OPERATIONS:										
B-52G AIRCRAFT										OMEGA 3.2
GROUND CREW										TEST 72-045-002
NEAR FIELD NOISE LEVELS										RUN 01
										02 DEC 74
										PAGE H1
LOCATION/CONDITION										
1/A 2/B 3/C 4/C 5/C 6/C 7/D 8/D										
HAZARD/PROTECTION										
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DB) AT EAR										
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DB) AT EAR										
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)										
NO PROTECTION										
OASLC										
OASLA										
T										
MINIMUM QPL EAR MUFFS										
OASLA*										
T										
AMERICAN OPTICAL 1700 EAR MUFFS										
OASLA*										
T										
V-51R EAR PLUGS										
OASLA*										
T										
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS										
OASLA*										
T										
H-133 GROUND COMMUNICATION UNIT										
OASLA*										
T										
COMMUNICATION										
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)										
PSIL										
T										
ANNOYANCE										
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)										
TONE CORRECTION (C IN DB)										
PNLT										
C										



**TABLE 4**  
**TEST CONDITIONS**  
**FOR FAR-FIELD NOISE MEASUREMENTS**

**B-52G Aircraft, Ground Runups, Edwards AFB, CA**  
**14 September 1972**  
**Tail #30399**

*Aircraft Engine Operation*

Idle	<p>All Engines</p> <p>EPR — Did Not Register</p> <p>61 % RPM NC (Core Speed)</p> <p>300 C EGT (Exhaust Gas Temperature)</p> <p>1150 LBS/HR FF (Fuel Flow)</p>
Engine Start (All other engines idle)	<p>#4 Engine</p> <p>2.04 EPR (Engine Pressure Ratio)</p> <p>90 % RPM NC</p> <p>520 C EGT</p> <p>6200 LBS/HR FF</p>
80% Runup	<p>All Engines</p> <p>1.35 EPR (Engine Pressure Ratio)</p> <p>90 % RPM NC</p> <p>520 C EGT</p> <p>6200 LBS/HR FF</p>
80% Runup	<p>All Engines</p> <p>1.35 EPR</p> <p>80 % RPM NC</p> <p>340 C EGT</p> <p>2400 LBS/HR FF</p>
90% Runup	<p>All Engines</p> <p>2.04 EPR</p> <p>90 % RPM NC</p> <p>500 C EGT</p> <p>6000 LBS/HR FF</p>
Takeoff Rated Thrust	<p>All Engines</p> <p>2.45 EPR</p> <p>94 % RPM NC</p> <p>580 C EGT</p> <p>8000 LBS/HR FF</p>

*Meteorology*

Temperature	15.6 C
Bar Pressure	0.701 M Hg
Rel Humidity	39 %
Wind	Calm

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																			
1/3 OCTAVE BAND																			
DISTANCE = 75 METERS																			
NOISE SOURCE/SUBJECT:																			
OPERATION:																			
8-52G AIRCRAFT																			
J57-43W ENGINE																			
FAR FIELD NOISE																			
METEOROLOGY:																			
TEMP = 16 C																			
BAR PRESS = .701 M HG																			
REL HUMID = 39 %																			
PAGE 2																			
IDENTIFICATION:																			
OMEGA 1-4																			
TEST 75-002-010																			
RUN 01																			
15 APR 75																			
ANGLE (DEGREES)																			
FREQ (HZ)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	68	67<	68	67<	66<	68<	69	71	73	72	73	73	75	76	75	75	74		
31.5	70	70	71	70	71	71	72	73	74	74	75	76	78	80	79	80	74		
40	72	71<	73	73	73	71<	72	73	74	75	75	77	77	78	79	80	74		
50	79	78	77	77	78	77	77	78	79	78	79	79	79	80	82	81	77		
63	76<	76<	76<	75<	76<	76<	75<	77<	79	78	79	80	81	82	82	81	77<		
80	75<	74<	74<	74<	75<	74<	74<	76<	77<	77<	78<	79<	79<	81	81	79<	77<		
100	77<	78<	78<	77<	77<	78<	79<	80	80<	80	82	83	82	84	83	81	77<		
125	75<	76<	76<	77<	75<	76<	76<	78<	78<	79<	78<	81<	83	83	83	80<	76<		
160	78<	79<	78<	79<	76<	77<	78<	80<	80<	79<	79<	80<	83	84	83	80<	75<		
200	78	79	79	77	77	77	77	79	80	80	80	81	81	82	82	79	73<		
250	79	79	79	80	79	78<	79	80	81	82	82	82	83	81	82	78<	72<		
315	80	81	82	81	80	80	80	81	81	81	82	82	84	83	81	79	74		
400	85	85	84	84	83	82	82	83	85	87	85	85	83	84	81	79	75		
500	85	85	85	84	82	81	80	82	83	83	83	84	82	82	80	78	74		
630	86	86	86	85	84	82	81	81	83	83	82	83	83	82	79	78	74		
800	88	87	88	87	85	83	81	81	81	81	81	81	81	80	79	77	74		
1000	92	91	91	91	90	87	87	90	88	86	85	84	83	82	82	80	77		
1250	95	94	96	95	93	88	89	91	88	86	86	86	86	84	84	81	77		
1600	90	90	91	91	92	89	89	87	83	80	81	81	82	81	79	78	74		
2000	96	95	95	93	92	90	90	88	85	81	82	81	82	80	79	77	72		
2500	93	92	91	89	88	87	86	85	82	78	79	79	80	78	77	75	71		
3150	91	91	91	91	91	90	91	91	87	86	89	90	88	86	83	79	75		
4000	88	88	88	87	87	85	86	85	87	87	91	94	93	90	86	83	79		
5000	85	85	85	84	83	80	79	79	76	75	78	80	79	76	74	72	68		
6300	80	80	80	79	79	77	77	77	75	75	79	79	79	76	74	71	67		
8000	76	76	76	75	76	76	76	76	76	77	79	80	82	78	77	75	71		
18000	68	68	67	66	66	65	66	65	64	67	71	73	72	68	64	62	56		
OVERALL	102	101	102	101	100	98	98	98	97	96	97	98	98	97	95	93	89		

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																			
1/3 OCTAVE BAND																			
DISTANCE = 75 METERS																			
NOISE SOURCE/SUBJECT:																			
( OPERATION:																			
( 90% RPM ENGINE NO. 4																			
( IDLE POWER																			
( 61% RPM ALL OTHER ENGINES																			
( FREE FLOW																			
METEOROLOGY:																			
TEMP = 16 C																			
BAR PRESS = .701 M HG																			
REL HUMID = 39 %																			
IDENTIFICATION:																			
OMEGA 1.4																			
TEST 75-002-010																			
RUN 02																			
15 APR 75																			
PAGE 2																			
ANGLE (DEGREES)																			
FREQ (HZ)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	79	80	82	81	78	82	85	84	86	85	84	85	84	92	95	93			
31.5	83	81	82	80	83	84	84	84	86	87	89	90	91	96	99	98			
40	83	83	81	85	85	84	88	88	90	89	92	91	95	99	103	100			
50	85	84	86	87	88	89	91	91	91	92	93	96	99	105	105	101			
63	87	88	89	90	92	94	94	95	96	95	95	98	102	109	110	104			
80	89	88	91	91	91	94	95	96	98	98	98	100	104	109	112	107			
100	91	92	94	94	94	96	97	98	99	99	102	103	106	111	114	108			
125	93	92	94	95	97	97	99	100	102	101	103	107	108	112	112	106			
160	95	96	97	99	99	99	100	100	102	102	103	108	108	111	109	105			
200	96	96	97	98	98	98	101	101	102	103	105	107	108	109	109	103			
250	96	96	96	98	99	99	101	101	103	102	104	108	108	108	107	105			
315	94	94	95	96	98	99	99	101	101	102	102	106	109	105	105	103			
400	95	96	97	98	99	99	100	101	103	103	105	107	109	108	107	105			
500	95	96	96	97	98	100	100	101	103	104	105	107	108	108	106	103			
630	94	96	96	97	98	98	99	101	102	103	105	107	108	107	106	101			
800	94	95	95	96	96	98	97	99	100	102	103	106	106	104	103	99			
1000	93	96	95	96	97	97	97	99	99	101	102	104	105	102	101	96			
1250	95	96	95	96	96	96	97	98	98	100	101	104	103	100	99	95			
1600	91	93	94	95	95	95	96	97	97	100	100	102	101	99	97	93			
2000	96	96	96	97	97	97	98	98	98	101	101	102	101	99	97	93			
2500	97	97	97	101	98	98	97	97	97	98	98	99	97	96	94	90			
3150	92	93	94	95	95	94	95	96	96	97	96	98	97	95	93	88			
4000	89	90	90	91	91	91	91	93	94	95	96	97	96	94	92	88			
5000	89	89	90	90	90	90	90	91	91	92	92	92	91	90	88	84			
6300	84	84	85	85	86	86	86	87	88	89	88	89	88	87	85	81			
8000	81	81	82	83	83	84	84	85	87	88	87	87	87	85	82	78			
10000	74	75	75	76	76	77	76	78	79	81	81	81	81	79	76	71			
OVERALL	107	107	108	109	110	110	111	112	113	114	115	118	119	120	120	116			

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																			
1/3 OCTAVE BAND																			
DISTANCE = 75 METERS																			
NOISE SOURCE/SUBJECT:																			
( OPERATION: )																			
( ( 80% RPM ) )																			
( ( ALL ENGINES ) )																			
( ( FREE FLOW ) )																			
METEOROLOGY: = 16 C																			
BAR PRESS = .701 M HG																			
REL HUMID = 39 %																			
IDENTIFICATIONS:																			
OMEGA 1.4																			
TEST 75-002-010																			
RUN 03																			
15 APR 75																			
PAGE 2																			
FREQ	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
( HZ )																			
25	76	75	75	77	77	78	79	80	80	82	80	82	84	87	92	91			
31.5	80	79	77	78	79	79	80	80	81	82	84	87	86	91	94	94			
40	81	81	80	80	81	81	83	83	85	86	87	88	91	94	98	97			
50	83	83	83	84	84	84	85	86	87	88	90	92	94	98	101	98			
63	85	85	85	85	86	87	87	88	90	91	91	93	97	100	103	100			
80	87	86	87	87	87	88	89	91	92	92	94	95	99	102	105	99			
100	88	88	89	89	89	90	92	93	94	95	97	99	101	104	105	101			
125	90	90	90	89	89	91	92	94	95	96	97	99	100	106	104	99			
160	90	91	91	90	90	90	92	94	95	97	98	99	101	105	104	97			
200	90	90	90	90	89	90	91	93	94	95	98	99	101	102	102	94			
250	91	91	91	91	90	92	91	94	94	96	97	100	101	101	101	93			
315	90	90	90	91	90	90	92	94	94	95	95	98	100	100	98	91			
400	91	92	92	92	91	91	92	95	95	97	98	100	101	99	96	90			
500	92	92	92	92	91	90	91	95	95	96	96	100	99	98	95	89			
630	93	93	93	92	92	91	90	94	93	94	95	98	99	95	93	88			
800	93	92	92	92	92	90	89	93	92	92	93	96	97	93	91	85			
1000	93	92	92	91	91	90	89	92	91	91	92	95	96	92	89	84			
1250	97	97	99	97	97	93	91	92	91	91	92	94	95	92	89	81			
1600	98	97	98	98	97	96	95	93	92	91	91	93	94	90	87	80			
2000	104	104	106	107	108	107	104	102	101	98	96	95	96	93	89	80			
2500	97	97	96	96	97	94	94	93	92	90	90	90	91	89	84	76			
3150	97	95	96	96	95	94	94	93	92	90	89	90	90	89	84	75			
4000	101	101	100	101	101	100	100	101	98	95	92	92	91	88	84	74			
5000	95	95	94	95	94	93	93	93	92	92	90	89	88	86	82	73			
6300	93	93	93	93	93	92	92	93	94	98	97	97	96	91	86	75			
8000	89	89	89	89	89	87	88	87	86	88	88	90	91	86	83	73			
10000	82	82	81	82	82	81	80	80	79	81	80	80	80	77	73	63			
OVERALL	109	109	109	110	110	109	108	108	108	108	106	110	111	113	113	108			

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)		IDENTIFICATION:																	
1/3 OCTAVE BAND	1/3 OCTAVE BAND	1/3 OCTAVE BAND	1/3 OCTAVE BAND																
DISTANCE = 75 METERS	DISTANCE = 75 METERS	DISTANCE = 75 METERS	DISTANCE = 75 METERS																
5	5	5	5																
NOISE SOURCE/SUBJECT:		METEOROLOGY:																	
( OPERATION:		TEMP = 16 C																	
( 8-52G AIRCRAFT		BAR PRESS = .701 M HG																	
( J57-43M ENGINE		REL HUMID = 39 %																	
( FAR FIELD NOISE		PAGE 2																	
FREQ (HZ)		ANGLE (DEGREES)																	
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	
25	86	84	86	86	83	86	90	89	90	93	93	94	96	102	103	102			
31.5	88	88	88	87	89	89	90	91	92	93	95	97	100	104	108	105			
40	89	89	89	89	91	93	94	95	96	96	99	102	107	110	105				
50	91	91	91	93	92	93	95	96	96	97	100	102	106	110	113	105			
63	95	94	95	95	95	97	98	99	100	101	102	106	111	114	116	105			
80	96	96	96	96	96	99	99	101	102	103	105	105	111	116	116	106			
100	98	99	99	99	99	101	102	104	106	106	109	108	114	118	117	106			
125	101	102	102	102	102	104	105	107	109	112	113	114	119	125	119	106			
160	104	103	103	104	104	105	105	107	109	112	115	115	120	125	120	103			
200	106	104	105	104	104	105	105	107	108	111	115	116	119	122	122	103			
250	105	105	105	105	105	105	105	107	108	111	115	116	119	122	122	103			
315	103	103	104	104	104	104	105	107	108	110	112	114	118	119	119	103			
400	104	105	104	105	105	105	106	108	108	110	113	116	120	121	119	104			
500	104	104	103	104	104	105	105	106	108	111	113	114	116	118	117	104			
630	104	104	103	104	104	104	104	106	107	109	112	114	116	117	117	103			
800	103	103	103	103	103	103	102	105	106	108	109	112	114	114	114	100			
1000	101	102	102	102	102	102	102	105	106	108	109	111	113	111	111	98			
1250	100	101	101	101	101	101	102	104	105	106	108	111	112	111	109	94			
1600	99	99	100	99	100	99	101	103	105	105	107	109	111	110	107	92			
2000	101	101	102	101	102	101	102	104	105	106	108	110	111	110	106	92			
2500	106	106	106	107	106	103	104	105	104	103	105	107	109	107	104	88			
3150	99	100	99	100	99	98	99	101	101	102	103	106	107	106	102	87			
4000	95	96	95	96	95	96	96	99	100	101	102	104	105	105	101	85			
5000	97	97	97	97	96	96	96	97	97	97	99	100	102	103	102	99	82		
6300	91	92	91	92	91	91	92	94	95	96	97	99	101	101	99	80			
8000	89	89	89	90	89	89	89	91	92	95	97	98	99	99	97	74			
10000	82	82	83	83	82	82	82	85	86	88	92	94	94	93	90	73			
OVERALL	115	115	115	115	115	115	116	118	119	121	123	125	128	132	129	116			
LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.																			



TABLE: MEASURED SOUND PRESSURE LEVEL (DB)															IDENTIFICATION:	
5															OMEGA 1.4	
1/3 OCTAVE BAND															TEST 75-002-010	
DISTANCE = 75 METERS															RUN 05	
NOISE SOURCE/SUBJECT:															15 APR 75	
8-52G AIRCRAFT															PAGE 2	
J57-43M ENGINE																
FAR FIELD NOISE																
OPERATION:																
MILITARY POWER																
94% RPM																
ALL ENGINES																
FREE FLOW																
METEOROLOGY:																
TEMP = 16 C																
BAR PRESS = .701 M HG																
REL HUMID = 39 %																
FREQ (HZ)																
ANGLE (DEGREES)																
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180																
25	MM	88	89	89	88	92	92	94	96	95	98	102	104	103		
31.5	91	89	90	90	92	93	93	96	96	98	100	102	105	107	106	
40	92	92	92	94	94	95	97	97	98	99	103	106	109	111	106	
50	95	95	96	96	95	98	99	99	101	103	105	110	113	114	107	
63	98	97	98	98	99	100	103	104	103	105	108	113	117	116	110	
80	98	100	99	101	101	104	105	105	105	107	108	116	119	118	109	
101	102	102	102	102	103	104	106	108	109	111	111	116	121	118	109	
125	104	105	104	103	104	105	107	111	113	114	116	121	124	118	109	
160	107	107	107	107	107	109	110	112	116	116	118	122	128	120	113	
200	109	107	106	108	108	110	110	113	116	117	118	122	127	122	112	
250	108	109	108	109	108	110	112	112	116	119	120	123	125	124	113	
315	107	108	108	108	108	109	112	113	114	116	119	122	122	120	111	
400	109	109	108	109	109	110	111	112	114	117	119	123	125	122	112	
500	114	114	113	113	112	111	111	112	112	114	118	121	123	120	111	
630	111	111	111	112	112	111	112	112	113	114	116	119	121	119	111	
800	108	109	109	109	110	109	110	112	113	115	117	118	119	116	108	
1000	106	107	107	107	108	108	108	111	111	112	113	116	117	117	105	
1250	104	105	106	105	106	105	107	109	110	112	113	116	116	115	101	
1600	105	105	106	106	106	105	107	109	110	111	112	115	115	114	111	
2000	104	105	105	105	105	105	106	107	110	111	112	113	115	114	111	
2500	102	103	103	103	103	103	104	106	107	108	109	112	113	111	108	
3150	98	99	99	99	100	100	101	104	105	106	108	110	110	109	92	
4000	96	96	97	97	97	98	98	100	102	103	105	107	107	106	90	
5000	92	93	93	94	94	95	98	99	100	102	103	105	105	104	100	
6300	88	89	89	90	91	92	95	96	98	98	100	102	103	102	98	
8000	82	83	83	84	85	86	89	91	93	96	99	100	100	98	80	
10000	120	121	121	121	120	121	123	124	125	127	129	132	135	131	122	
OVERALL	120	121	121	121	120	121	123	124	125	127	129	132	135	131	122	

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

[illegible]



TABLE: DIRECTIVITY INDEX (DB)																				
6																				
IDENTIFICATION:																				
OMEGA 1.4																				
TEST 75-002-010																				
RUN 03																				
METEOROLOGY: TEMP = 16 C																				
BAR PRESS = .701 H HG																				
REL HUMID = 39 %																				
PAGE 4																				
NOISE SOURCE/SUBJECT: ( OPERATION: )																				
B-52G AIRCRAFT ( 80% RPM )																				
J57-43M ENGINE ( ALL ENGINES )																				
FAR FIELD NOISE ( FREE FLOW )																				
FREQ (HZ)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	
ANGLE (DEGREES)																				
1/3 OCTAVE																				
25	-8	-9	-10	-8	-8	-6	-5	-4	-4	-3	-4	-2	-1	3	8	7	7	7	7	7
31.5	-7	-8	-10	-9	-8	-8	-7	-7	-6	-5	-3	-0	-1	4	7	8	8	8	8	8
40	-10	-9	-10	-10	-10	-10	-7	-7	-6	-5	-3	-2	-1	5	8	8	8	8	8	8
50	-10	-10	-10	-9	-9	-9	-8	-7	-6	-5	-5	-2	2	5	8	8	8	8	8	8
63	-10	-10	-10	-10	-9	-8	-8	-7	-5	-5	-3	-1	2	5	8	8	8	8	8	8
80	-10	-11	-10	-9	-9	-9	-8	-6	-5	-5	-3	-1	2	5	8	8	8	8	8	8
100	-11	-11	-9	-10	-9	-8	-7	-5	-4	-3	-1	0	2	6	7	7	7	7	7	7
125	-9	-8	-8	-9	-8	-8	-7	-5	-3	-3	-1	0	2	7	6	6	6	6	6	6
160	-8	-8	-8	-9	-8	-8	-6	-4	-3	-2	-1	1	3	6	5	5	5	5	5	5
200	-7	-7	-7	-7	-8	-7	-6	-4	-3	-2	1	2	4	5	5	5	5	5	5	5
250	-6	-6	-6	-6	-7	-6	-6	-4	-3	-1	0	3	4	4	4	4	4	4	4	4
315	-5	-6	-5	-5	-6	-6	-4	-2	-1	-1	0	3	5	4	2	2	2	2	2	2
400	-5	-4	-5	-5	-6	-6	-5	-2	-2	0	2	4	4	3	3	3	3	3	3	3
500	-4	-4	-3	-4	-5	-5	-5	-1	-0	0	1	4	4	2	2	2	2	2	2	2
630	-1	-1	-2	-2	-3	-3	-4	-0	-1	-1	0	3	4	0	0	0	0	0	0	0
800	0	-1	-0	-1	-1	-2	-3	-0	-1	-1	0	3	4	0	0	0	0	0	0	0
1000	1	0	0	-1	-1	-2	-3	-0	-1	-1	0	3	4	2	2	2	2	2	2	2
1250	4	3	5	4	4	3	2	-1	-1	-2	2	1	2	1	1	1	1	1	1	1
1600	4	4	4	4	4	5	2	1	0	-2	2	1	2	1	1	1	1	1	1	1
2000	2	2	4	4	4	6	2	2	1	-2	2	2	2	2	2	2	2	2	2	2
2500	4	4	4	4	4	4	2	1	1	-2	2	2	2	2	2	2	2	2	2	2
3150	5	3	4	4	4	3	2	2	1	-1	2	2	2	2	2	2	2	2	2	2
4000	4	4	3	3	3	2	2	2	1	-1	2	2	2	2	2	2	2	2	2	2
5000	4	4	3	3	3	2	2	2	1	-1	2	2	2	2	2	2	2	2	2	2
6300	-1	-2	-1	-1	-1	-2	-3	-2	-0	0	0	0	0	0	0	0	0	0	0	0
8000	1	1	1	1	1	-0	0	-0	-2	0	0	0	0	0	0	0	0	0	0	0
10000	2	2	1	2	2	1	0	0	-1	1	0	0	0	0	0	0	0	0	0	0
OCTAVE																				
31.5	-9	-9	-10	-9	-9	-8	-7	-6	-5	-4	-3	-2	0	4	8	7	7	7	7	7
63	-10	-11	-10	-10	-9	-9	-8	-6	-5	-4	-3	-2	0	5	8	8	8	8	8	8
125	-9	-9	-8	-9	-9	-8	-7	-5	-4	-3	-1	1	2	6	6	6	6	6	6	6
250	-6	-6	-6	-6	-7	-6	-5	-3	-3	-1	0	3	4	4	4	4	4	4	4	4
500	-3	-3	-3	-4	-4	-5	-5	-1	-1	0	1	4	4	2	2	2	2	2	2	2
1000	2	2	3	2	2	2	2	1	-1	-1	-0	-5	-4	-3	-3	-3	-3	-3	-3	-3
2000	2	3	4	5	5	4	2	-0	-1	-4	-5	-4	-5	-7	-11	-11	-11	-11	-11	-11
4000	4	4	3	4	4	2	2	3	0	-2	-4	-4	-5	-7	-11	-11	-11	-11	-11	-11
8000	-0	-1	-1	-0	-1	-2	-2	-1	-1	-3	-2	-2	-2	-3	-7	-7	-7	-7	-7	-7
OVERALL	-1	-1	-0	0	1	-0	-2	-1	-2	-2	-1	1	2	3	3	3	3	3	3	3



TABLE: DIRECTIVITY INDEX (DB)																			IDENTIFICATION:	
6																			OMEGA 1.4	
																			TEST 75-002-010	
																			RUN 05	
																			15 APR 75	
																			PAGE 4	
NOISE SOURCE/SUBJECT:																			METEOROLOGY:	
( B-52C AIRCRAFT																			TEMP = 16 C	
( J57-43M ENGINE																			BAR PRESS = .701 M HG	
( FAR FIELD NOISE																			REL HUMID = 39 %	
( FREE FLOW																				
FREQ (HZ)																			ANGLE (DEGREES)	
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	
1/3 OCTAVE																				
25	-10	-9	-9	-9	-8	-10	-6	-5	-4	-2	-2	1	1	4	7	5				
31.5	-9	-11	-11	-10	-10	-8	-7	-8	-4	-4	-2	0	2	5	7	6				
40	-11	-11	-11	-11	-9	-9	-9	-6	-5	-4	-3	-0	3	6	8	2				
50	-12	-12	-12	-11	-11	-11	-9	-7	-7	-5	-3	-1	3	7	7	1				
63	-12	-13	-11	-11	-11	-11	-10	-7	-6	-7	-4	-2	3	8	6	0				
80	-13	-13	-12	-12	-12	-11	-10	-7	-6	-6	-4	-3	4	8	6	-2				
100	-12	-11	-11	-11	-11	-10	-9	-7	-5	-4	-2	-2	5	8	5	-4				
125	-12	-11	-12	-13	-12	-12	-11	-9	-5	-3	-2	0	5	8	2	-7				
160	-12	-11	-12	-11	-11	-11	-10	-9	-6	-3	-3	-0	3	9	1	-6				
200	-10	-12	-11	-11	-11	-11	-9	-9	-5	-2	-1	-1	3	8	3	-7				
250	-11	-10	-11	-10	-10	-11	-9	-7	-7	-3	-0	1	5	6	5	-6				
315	-10	-9	-9	-9	-9	-9	-8	-5	-4	-3	-0	2	5	5	4	-6				
400	-9	-9	-10	-9	-9	-9	-8	-7	-6	-4	-1	1	4	7	3	-6				
500	-3	-3	-4	-4	-5	-6	-6	-5	-5	-3	1	2	4	6	3	-6				
630	-3	-3	-3	-4	-3	-5	-4	-4	-4	-3	-0	3	4	5	3	-5				
800	-4	-3	-3	-3	-2	-4	-3	-1	-3	-2	0	2	4	5	1	-7				
1000	-5	-4	-4	-4	-3	-4	-3	-1	-1	-0	0	3	4	4	1	-8				
1250	-6	-5	-5	-5	-4	-5	-4	-2	-1	0	1	4	4	3	0	-11				
1600	-7	-6	-6	-6	-5	-6	-4	-2	-1	0	1	4	4	3	0	-12				
2000	-7	-6	-6	-6	-5	-6	-4	-2	-0	1	2	4	4	3	-1	-13				
3150	-5	-3	-4	-4	-3	-4	-3	-1	-1	0	1	4	4	2	-1	-13				
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8000	-9	-8	-8	-7	-7	-6	-5	-3	-2	-0	2	5	5	4	-0	-14				
10000	-10	-10	-9	-9	-8	-8	-7	-4	-2	-0	2	5	5	4	-0	-14				
	-12	-12	-11	-11	-11	-10	-9	-6	-3	-1	1	5	6	3	-1	-15				
OCTAVE																				
31.5	-10	-11	-11	-11	-9	-9	-8	-6	-5	-4	-3	0	2	5	7	4				
63	-12	-13	-12	-12	-11	-11	-10	-7	-6	-6	-4	-2	4	7	4	-1				
125	-12	-11	-12	-12	-11	-11	-10	-8	-6	-3	-3	-0	4	9	2	-6				
250	-10	-10	-10	-10	-10	-10	-9	-7	-5	-3	-1	1	4	7	4	-6				
500	-5	-4	-5	-5	-6	-7	-6	-5	-5	-3	-0	2	5	6	3	-6				
1000	-5	-4	-4	-4	-3	-4	-3	-1	-2	-1	0	3	4	4	1	-8				
2000	-6	-5	-5	-5	-5	-5	-4	-2	-1	0	1	4	4	3	-0	-13				
4000	-7	-6	-6	-6	-6	-6	-5	-3	-1	0	2	4	4	3	-1	-13				
5000	-7	-7	-6	-6	-6	-6	-5	-3	-1	0	2	4	4	3	-1	-13				
6300	-9	-8	-8	-7	-7	-6	-5	-3	-2	-0	2	5	5	4	-0	-14				
8000	-10	-10	-9	-9	-8	-8	-7	-4	-2	-0	2	5	5	4	-0	-14				
10000	-12	-12	-11	-11	-11	-10	-9	-6	-3	-1	1	5	6	3	-1	-15				
OVERALL	-7	-7	-7	-7	-7	-8	-7	-5	-4	-2	-1	1	4	7	3	-6				

[illegible]

**DISTANCE = 100 METERS**

NOISE SOURCE/SUBJECT:

B-52G AIRCRAFT	(	IDLE POWER
J57-43M ENGINE	(	61% RPM
FAR FIELD NOISE	(	ALL ENGINES
	(	FREE FLOW

## OPERATIONS

**IDLE POWER  
61% RPM  
ALL ENGINES  
FREE FLOW**

## 1) METEOROLOGY:

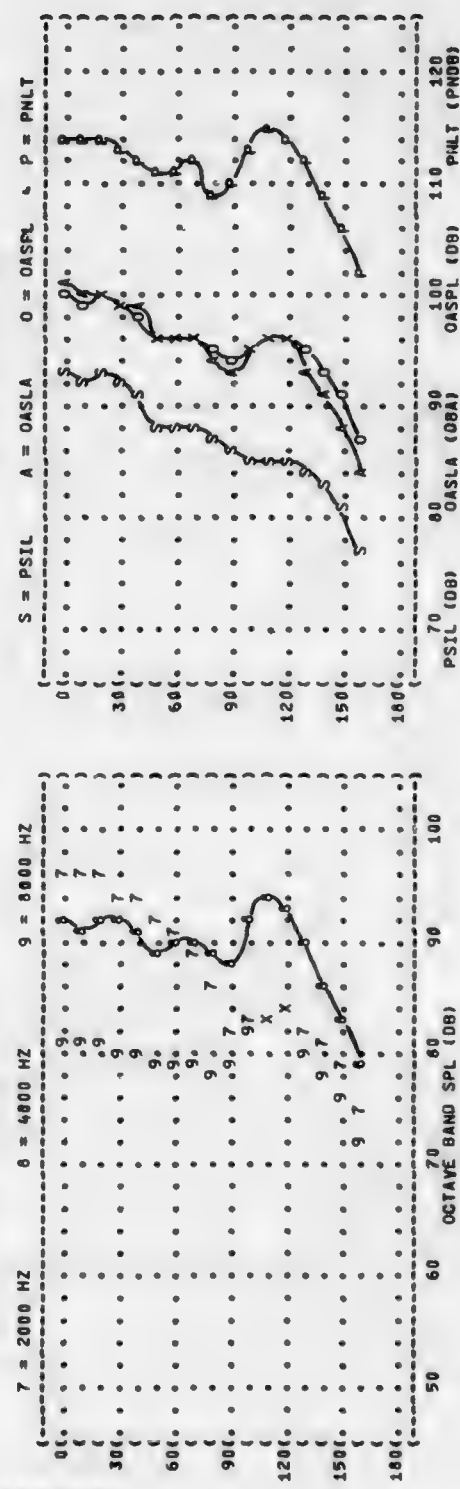
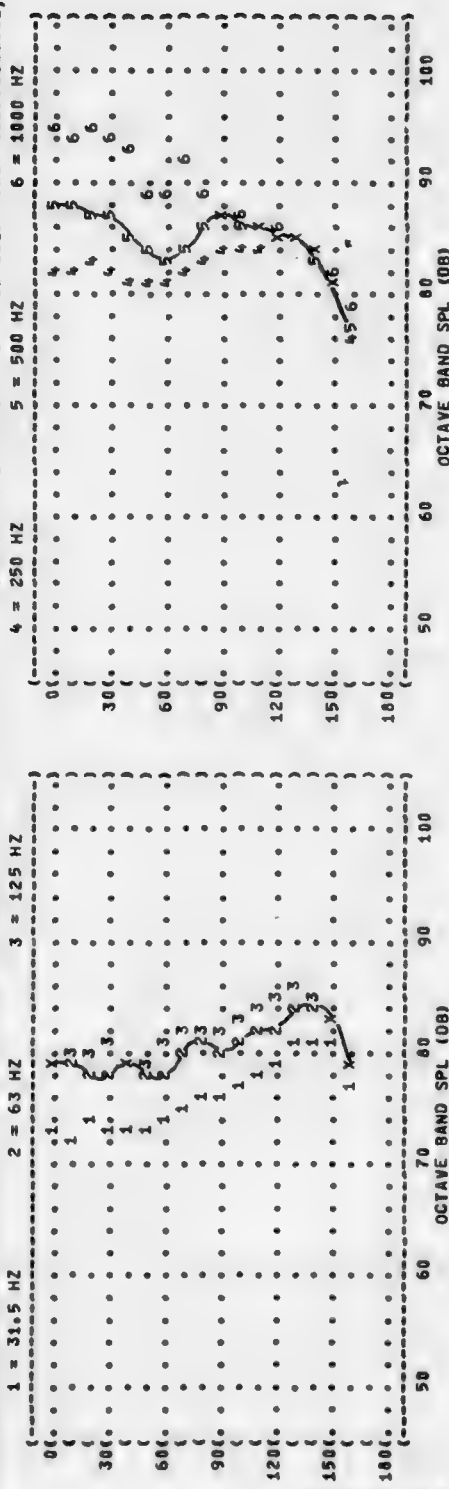
TEMP = 15 C  
BAR PRESS = .760 H HG  
REL HUMID = 70 %

IDENTIFICATIONS

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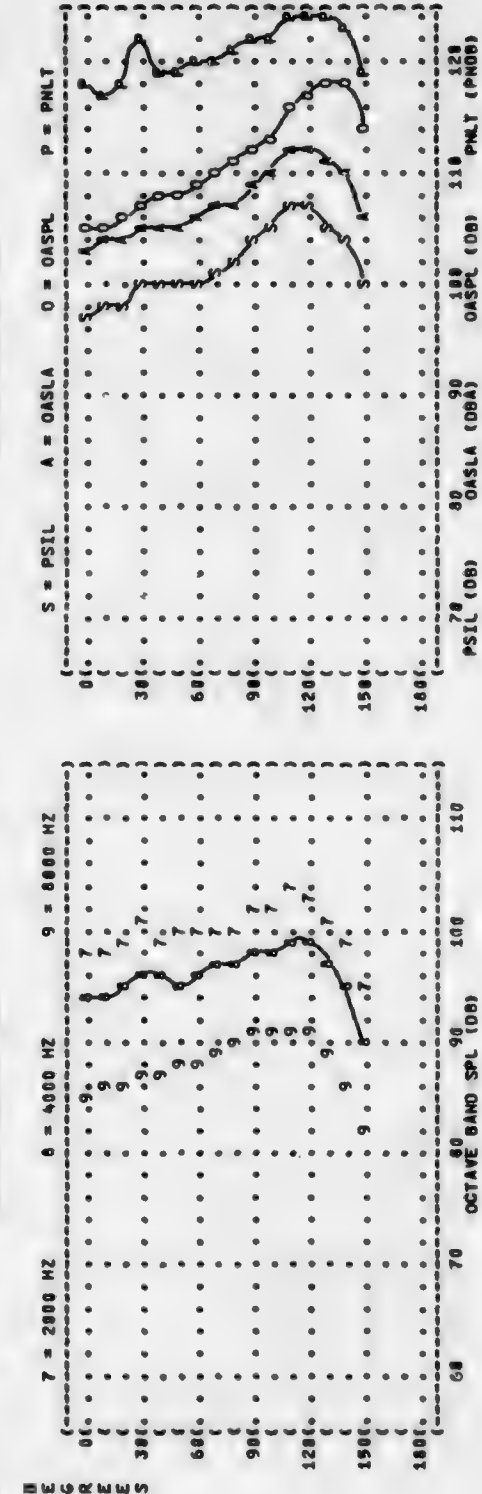
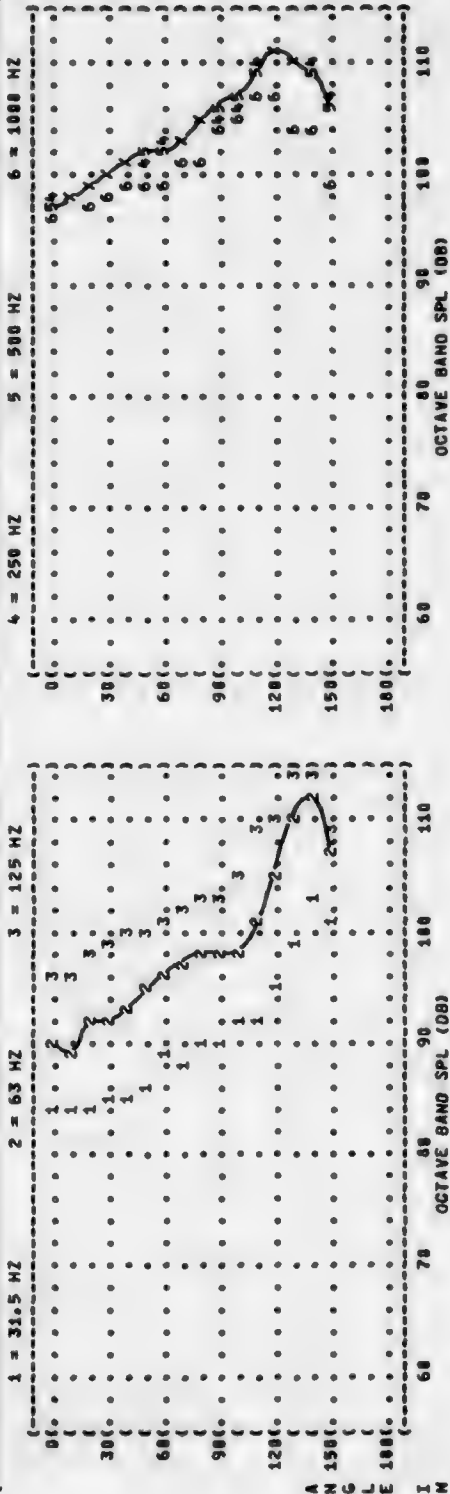
) ) OMEGA 1.6
) ) TEST 75-002-010
) ) RUN 01
) )
) ) 15 APR 75
) )
) ) PAGE 6
) )

```





( ( FIGURE 1 NORMALIZED FARFIELD NOISE LEVELS  
 ( ( ( 3 DISTANCE = 100 METERS  
 ( ( ( NOISE SOURCE/SUBJECT:  
 ( ( ( 9-52C AIRCRAFT  
 ( ( ( J57-A3M ENGINE  
 ( ( ( FAR FIELD NOISE  
 ( ( ( OPERATIONS:  
 ( ( ( 90% RPM ENGINE NO. 4  
 ( ( ( IDLE POWER  
 ( ( ( 61% RPM ALL OTHER ENGINES  
 ( ( ( FREE FLOW  
 ( ( ( METEOROLOGY:  
 ( ( ( TEMP = 15 C  
 ( ( ( BAR PRESS = .760 M HG  
 ( ( ( REL HUMID = 70 %  
 ( ( ( IDENTIFICATION:  
 ( ( ( OMEGA 1.4  
 ( ( ( TEST 75-002-010  
 ( ( ( RUN 82  
 ( ( ( 15 APR 75  
 ( ( ( PAGE 6



IDENTIFICATION: OMEGA 1.4  
 TEST 75-002-010  
 RUN 03  
 15 APR 75  
 PAGE 6  
 METEOROLOGY: TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 OPERATIONS: 80% RPM  
 ALL ENGINES  
 FREE FLOW  
 NOISE SOURCE/SUBJECT: B-52G AIRCRAFT  
 J57-A3M ENGINE  
 FAR FIELD NOISE  
 DISTANCE = 100 METERS  
 1 = 31.5 HZ 2 = 63 HZ 3 = 125 HZ

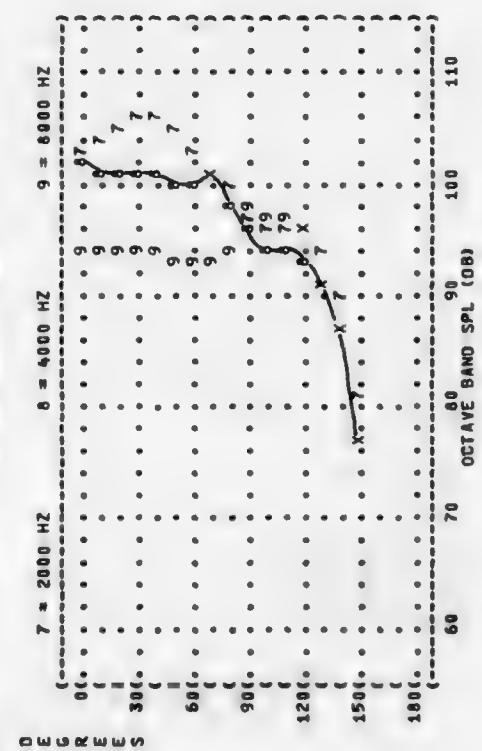
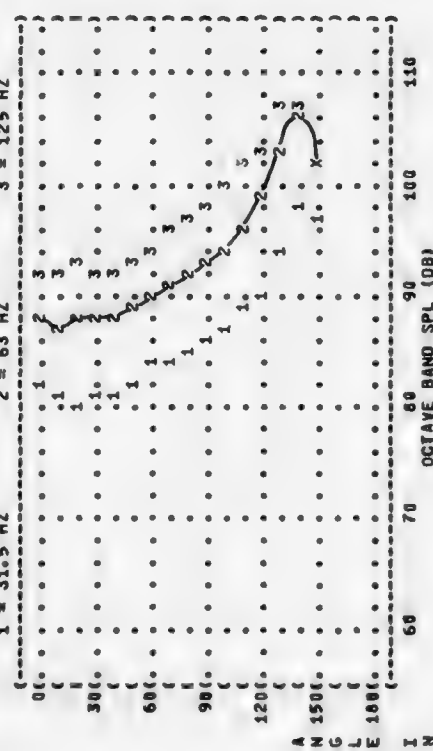
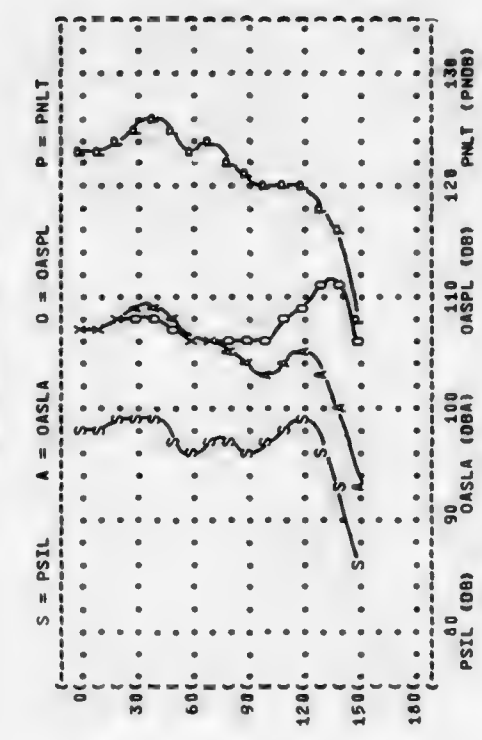
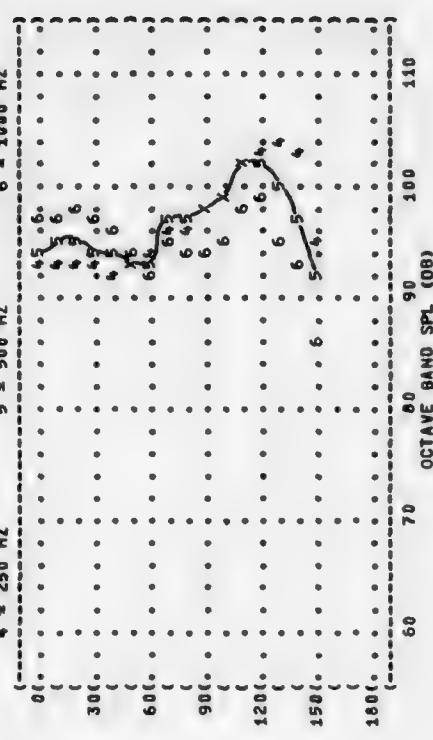


FIGURE 1: NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:

B-52G AIRCRAFT  
J57-43M ENGINE  
FAR FIELD NOISE

OPERATION:

90% RPM  
ALL ENGINES  
FREE FLOW

METEOROLOGY:

TEMP = 15 C  
BAR PRESS = 760 MM HG  
REL HUMID = 70 %

IDENTIFICATIONS:

OMEGA 1.4  
TEST 75-002-010  
RUN 04  
15 APR 75  
PAGE 6

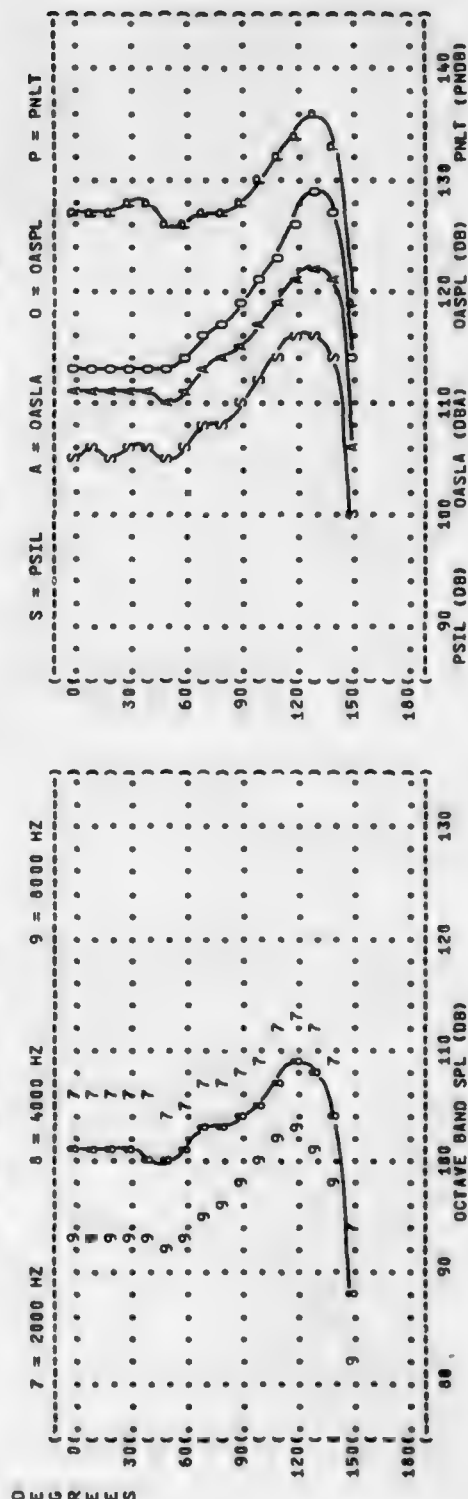
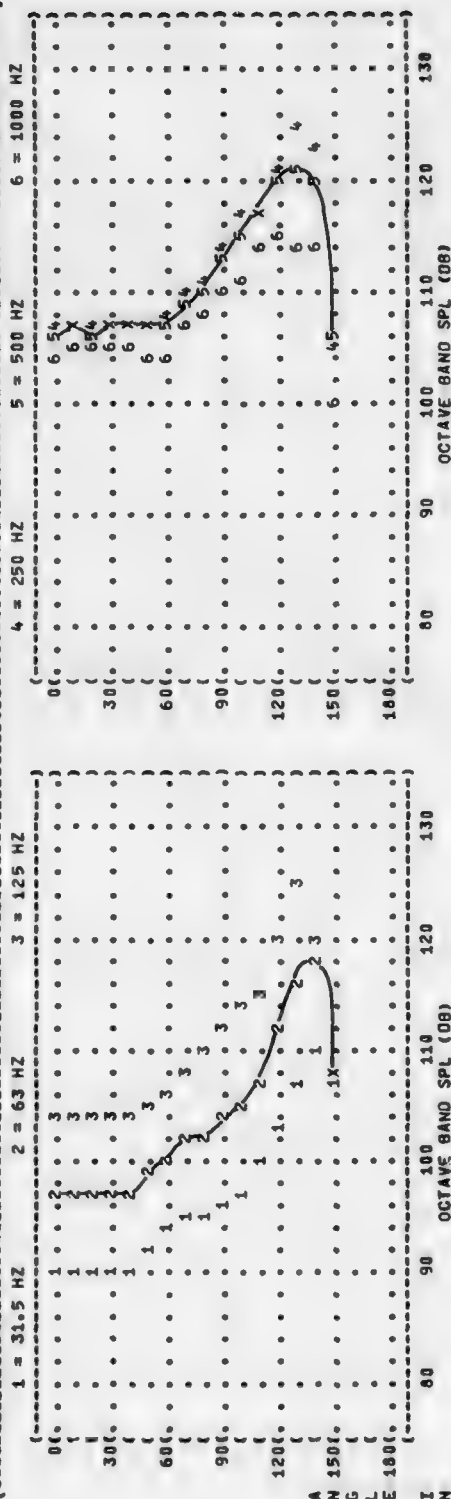


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:

8-52G AIRCRAFT  
J87-43M ENGINE  
FAR FIELD NOISE

OPERATION:

MILITARY POWER  
94% RPM  
ALL ENGINES  
FREE FLOW

METEOROLOGY:

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

IDENTIFICATION:

OMEGA 1-4  
TEST 75-802-010  
RUN 05  
15 APR 75  
PAGE 6

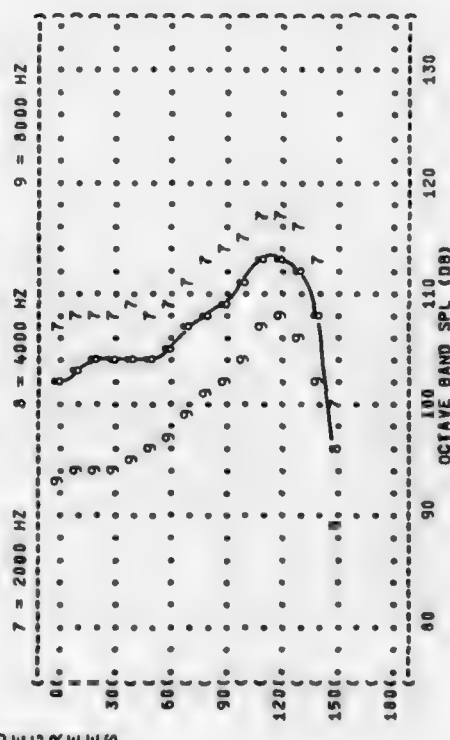
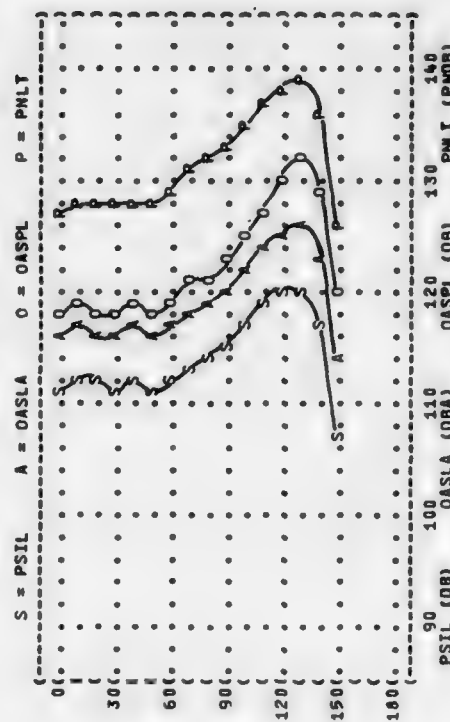
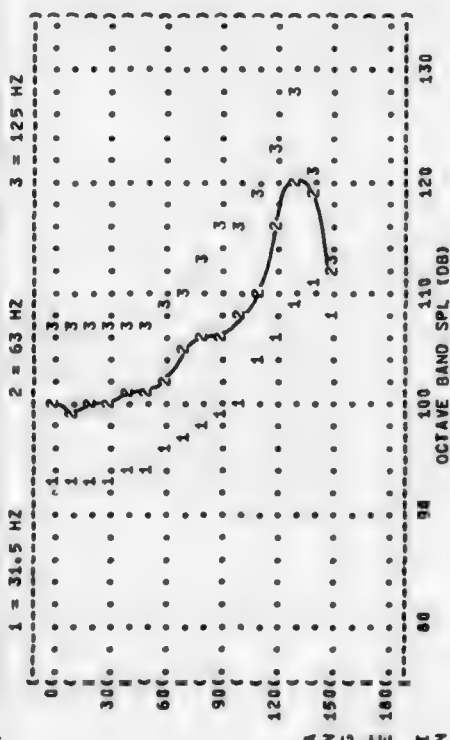
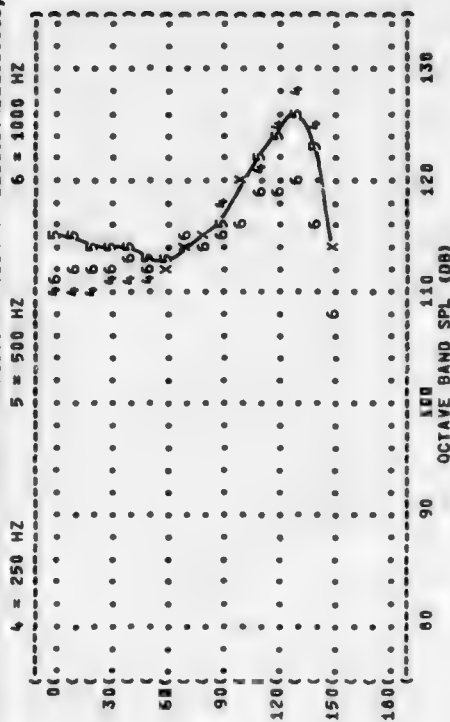


FIGURE 8: ACOUSTIC POWER LEVEL (PWL)

.....

[illegible]

B-52G AIRCRAFT	(	IDLE POWER	(	OPERATION
J57-43M ENGINE	(	61% RPM	(	
FAR FIELD NOISE	(	ALL ENGINES	(	
	(	FREE FLOW	(	

## 0 METEOROLOGY:

TEMP = 16 C  
BAR PRESS = .701 M HG  
REL HUMID = 39 %

**PAGE 3**



ИЗДАТЕЛЬСТВО «НАУКА» 1988

**FIGURE 3: ACOUSTIC POWER LEVEL (PWL)**

**OMEGA 1.4**

NOISE SOURCE/SUBJECT:	( OPERATION:	) METEOROLOGY:
B-52G AIRCRAFT	( 90% RPM ENGINE NO. 4	) TEMP = 16 C
J57-43W ENGINE	( IDLE POWER	) BAR PRESS = .701 W HG
FAR FIELD NOISE	( 61% RPM ALL OTHER ENGINES	) REL HUMID = 39 %
	( FREE FLOW	)



(-----) IDENTIFICATION: (-----)  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-010  
 ( ) RUN 03  
 ( ) 15 APR 75  
 ( ) PAGE 3  
 (-----) NOISE SOURCE/SUBJECT: (-----)  
 ( ) 8-52G AIRCRAFT ( ) OPERATION: ( ) METEOROLOGY: ( )  
 ( ) J57-43M ENGINE ( ) 80% RPM ( ) TEMP = 16 C  
 ( ) FAR FIELD NOISE ( ) ALL ENGINES ( ) BAR PRESS = .701 M HG  
 ( ) FREE FLOW ( ) REL HUMID = 39 %

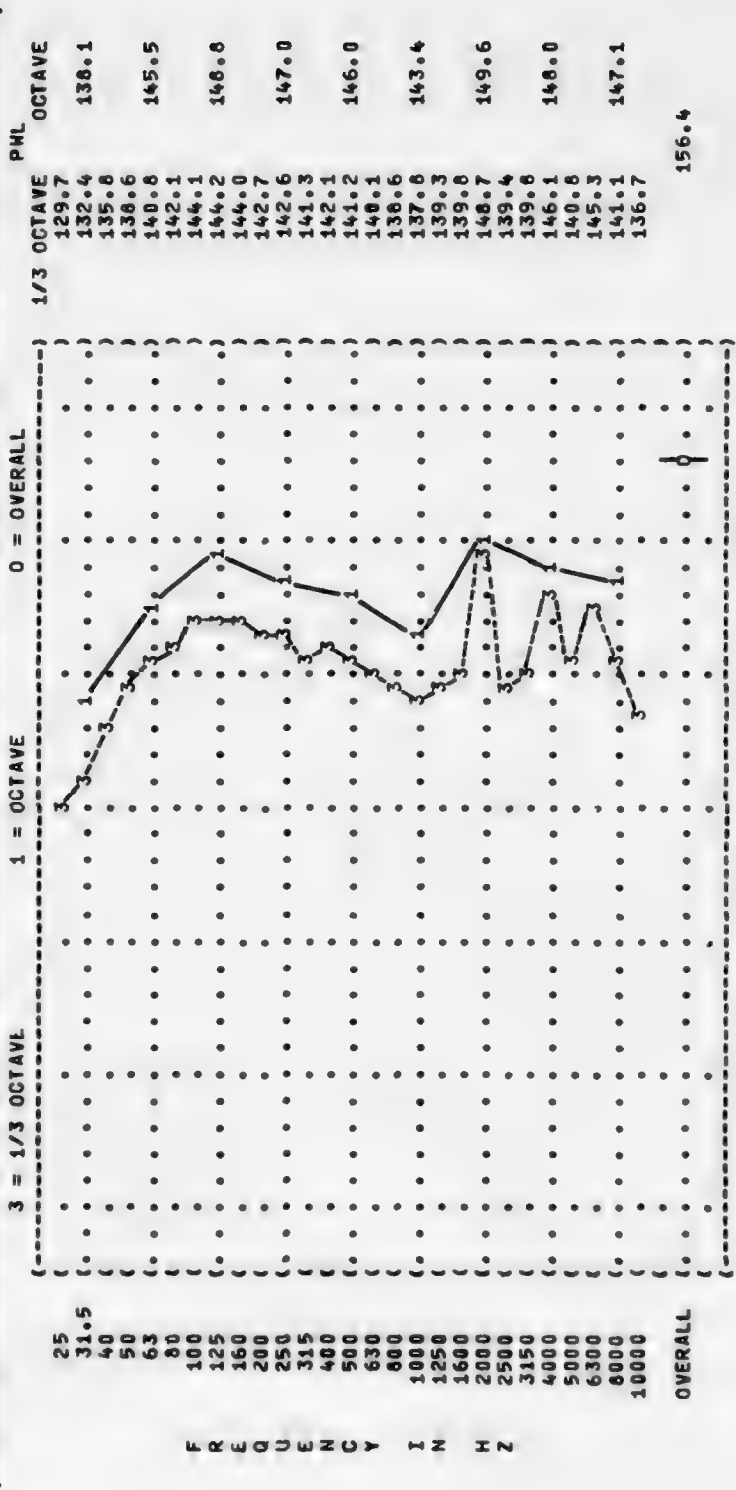




FIGURE 1. ACOUSTIC POWER LEVEL (PWL)

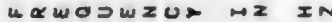


FIGURE: ACOUSTIC POWER LEVEL (PWL)

4

IDENTIFICATION:

OMEGA 1.4

TEST 75-002-010

RUN 05

15 APR 75

PAGE 3

NOISE SOURCE/SUBJECT:

OPERATION:

MILITARY POWER

94% RPM

ALL ENGINES

FREE FLOW

METEOROLOGY:

TEMP = 16 C

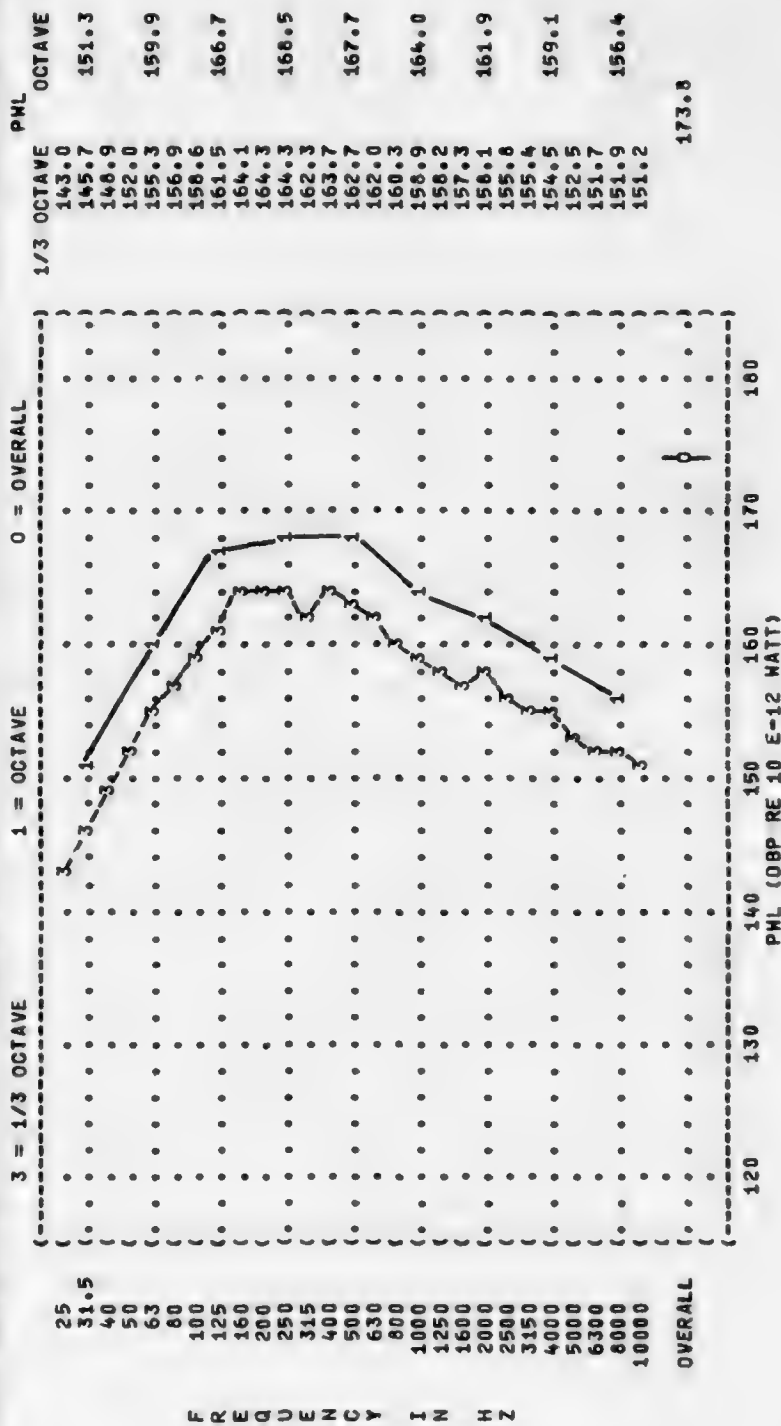
BAR PRESS = .701 H HG

REL HUMID = 39 %

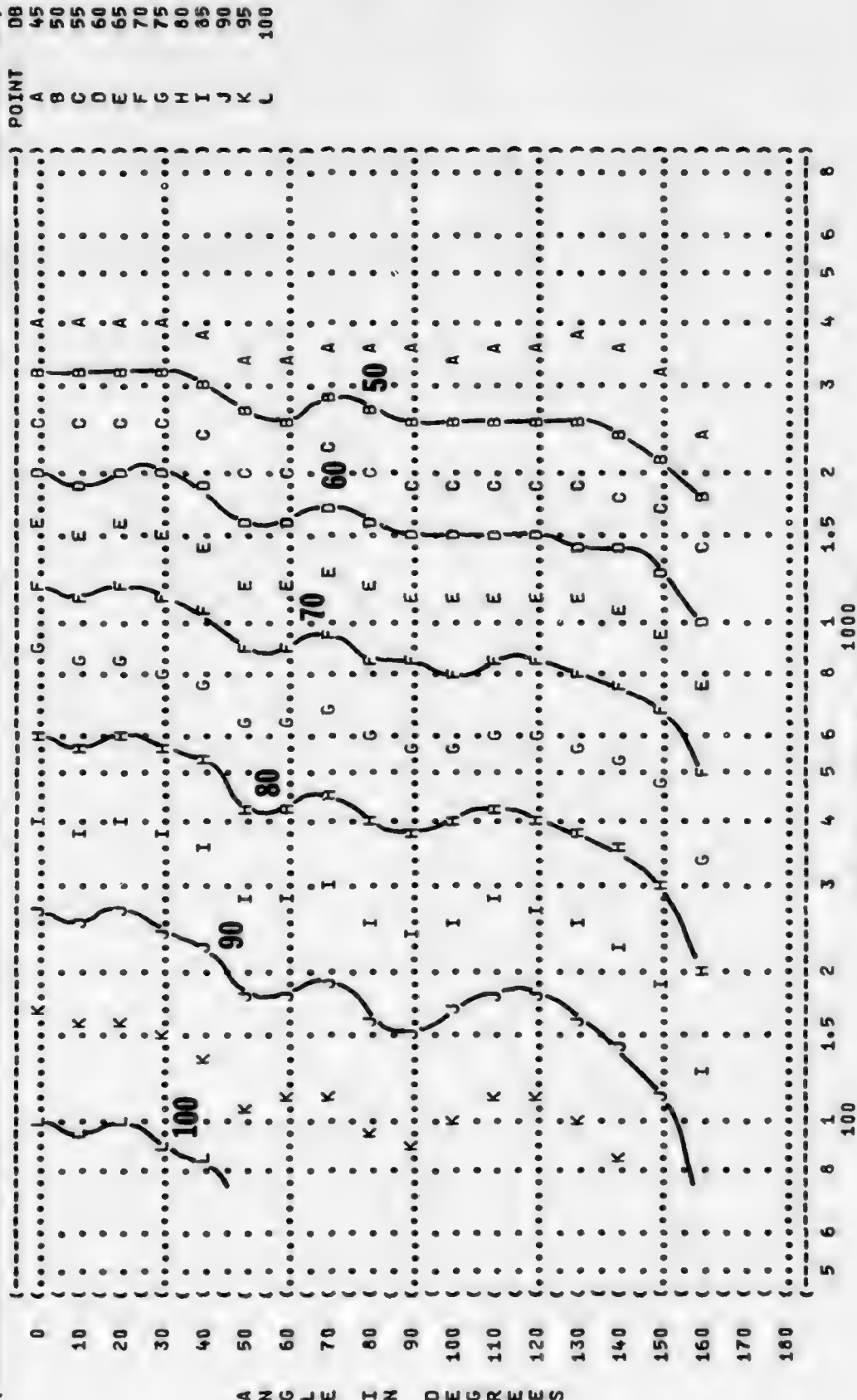
B-52G AIRCRAFT

J57-43M ENGINE

FAR FIELD NOISE

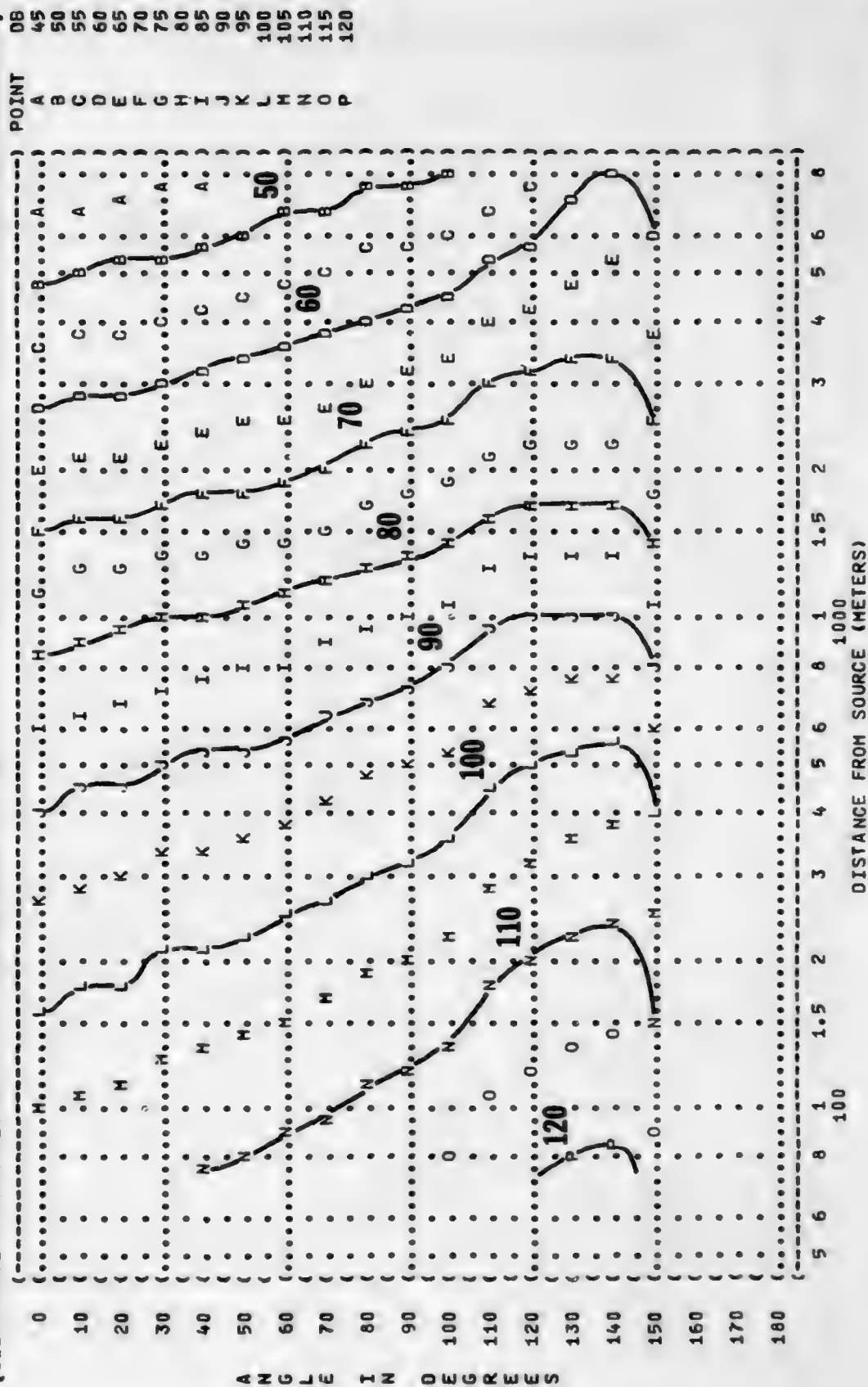


( FIGURE: OVERALL SOUND PRESSURE LEVEL (OASPL)  
 ( 5  
 ( IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-010  
 ( ) RUN 01  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) 15 APR 75  
 ( ) PAGE 13  
 ( ) METEOROLOGY:  
 ( ) OPERATION:  
 ( ) IDLE POWER  
 ( ) 61% RPM  
 ( ) ALL ENGINES  
 ( ) FREE FLOW  
 ( ) NOISE SOURCE/SUBJECT:  
 ( ) B-52G AIRCRAFT  
 ( ) J57-43W ENGINE  
 ( ) FAR FIELD NOISE



DISTANCE FROM SOURCE (METERS)

```
(-----)
( FIGURE: OVERALL SOUND PRESSURE LEVEL (OASPL) )
(      5      EQUAL LEVEL CONTOURS (DB) )
( )
( ) OMEGA 1.4 )
( TEST 75-002-010 )
( RUN 02 )
( )
( NOISE SOURCE/SUBJECT: ) METEOROLOGY:
( ( OPERATION: ) TEMP = 15 C )
( ( 90% RPM ENGINE NO. 4 ) BAR PRESS = .760 M HG )
( ( IDLE POWER ) REL HUMID = 70 % )
( ( 61% RPM ALL OTHER ENGINES ) )
( ( FREE FLOW ) )
( B-52G AIRCRAFT )
( J57-43M ENGINE )
( FAR FIELD NOISE )
(-----)
```



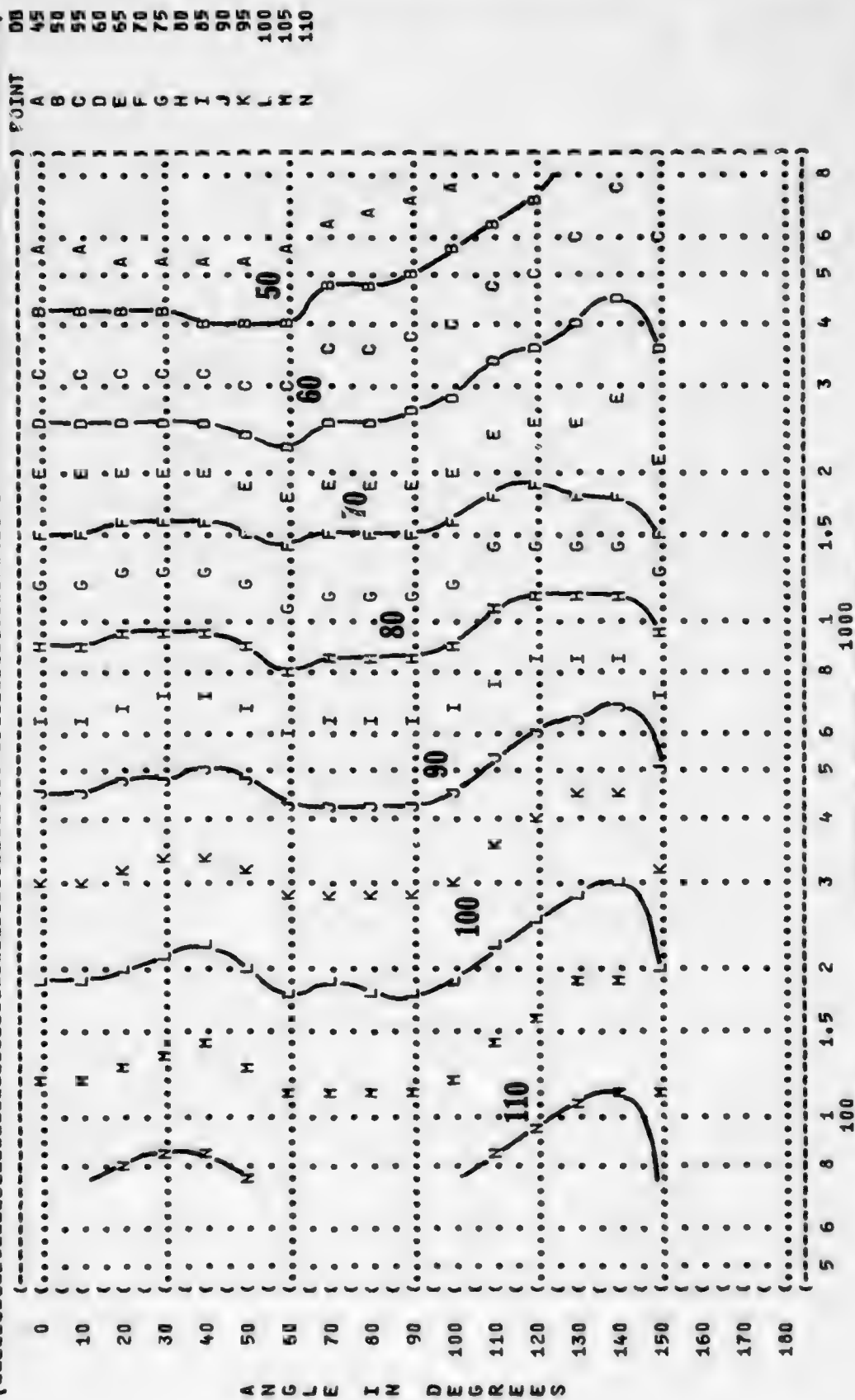
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IDENTIFICATION:  
OMEGA 1.4  
TEST 75-002-01  
RUN 03

METEOROLOGY:  
TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

OPERATION:  
80% RPM  
ALL ENGINE  
FREE FLOW

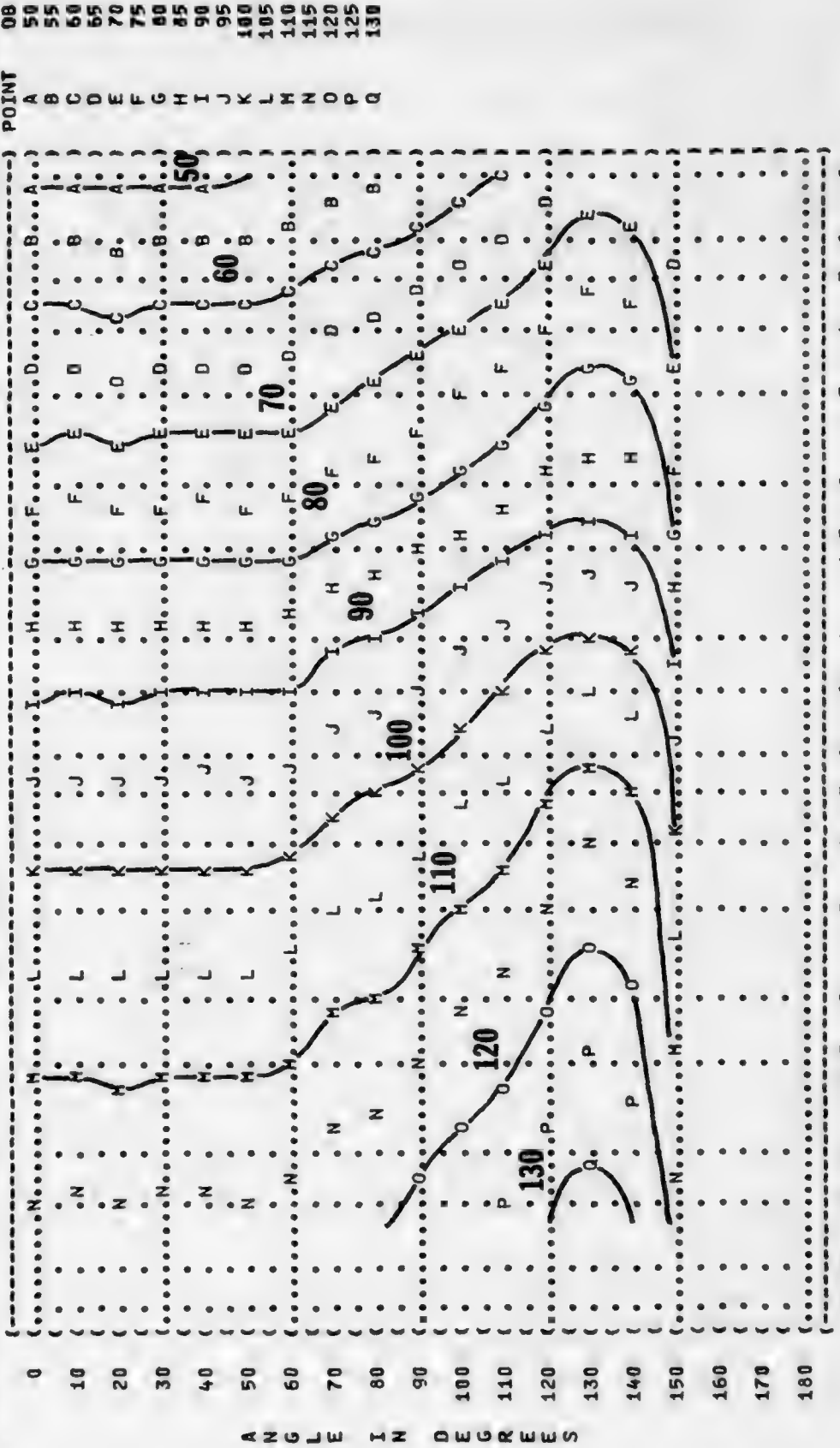
NOISE SOURCE/SUBJECT:  
B-52G AIRCRAFT  
J57-43W ENGINE  
FAR FIELD NOISE



IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-010  
 RUN 04  
 15 APR 75  
 PAGE 13

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

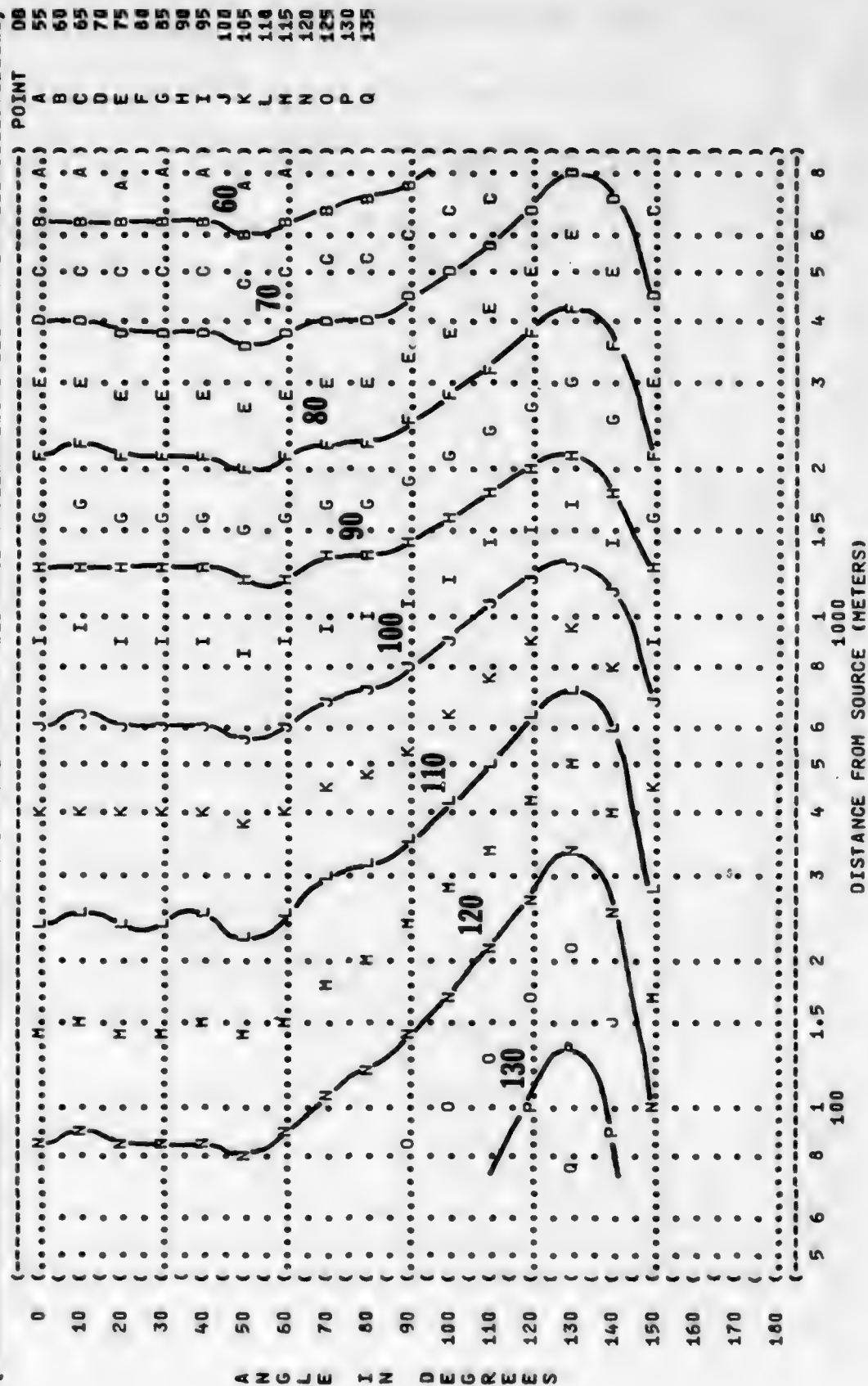
NOISE SOURCE/SUBJECT:  
 OPERATION:  
 8-52G AIRCRAFT  
 J57-43M ENGINE  
 FAR FIELD NOISE  
 90% RPM  
 ALL ENGINES  
 FREE FLOW



DISTANCE FROM SOURCE (METERS)  
 5 6 8 10 100 1000 8



( FIGURE: OVERALL SOUND PRESSURE LEVEL (OASPL) )  
 ( 5 )  
 ( NOISE SOURCE/SUBJECT: )  
 ( ( OPERATION: ) )  
 ( ( MILITARY POWER ) )  
 ( ( 94% RPM ) )  
 ( ( ALL ENGINES ) )  
 ( ( FREE FLOW ) )  
 ( B-52G AIRCRAFT )  
 ( J57-43W ENGINE )  
 ( FAR FIELD NOISE )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = 760 MM HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-010 )  
 ( RUN 05 )  
 ( 15 APR 75 )  
 ( PAGE 13 )

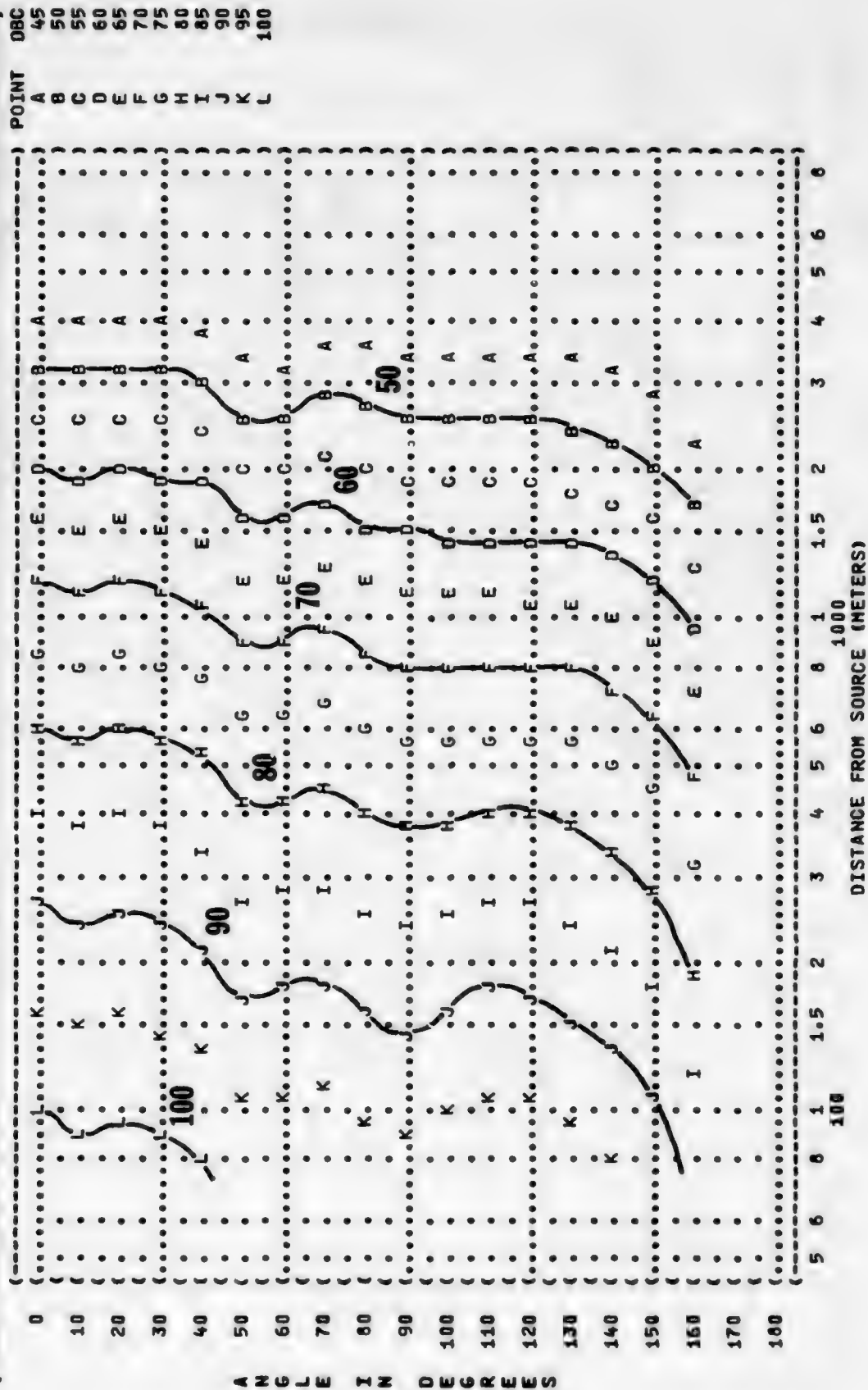




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(-----)
( ( FIGURE: C-WEIGHTED OVERALL SOUND LEVEL (OASLC) )
( ( 6 )
( ( EQUAL LEVEL CONTOURS (DBC) )
(-----)
( ( NOISE SOURCE/SUBJECT: )
( ( OPERATION: ) METEOROLOGY: )
( ( IDLE POWER ) ) TEMP = 15 C )
( ( 61% RPM ) ) BAR PRESS = .760 M HG )
( ( ALL ENGINES ) ) REL HUMID = 70 % )
( ( FREE FLOW ) ) )
( ( B-52G AIRCRAFT )
( ( J57-43M ENGINE )
( ( FAR FIELD NOISE )
(-----)
( ( IDENTIFICATION: )
( ( ) )
( ( OMEGA 1.4 )
( ( TEST 75-002-010 )
( ( RUN 01 )
( ( 15 APR 75 )
( ( PAGE 14 )
(-----)

```



( FIGURE: C-WEIGHTED OVERALL SOUND LEVEL (OASLC) )  
 ( 6 )  
 ( NOISE SOURCE/SUBJECT: )  
 ( ( OPERATION: ) )  
 ( ( 90% RPM ENGINE NO. 4 ) )  
 ( ( IDLE POWER ) )  
 ( ( 61% RPM ALL OTHER ENGINES ) )  
 ( ( FREE FLOW ) )  
 ( 8-52G AIRCRAFT )  
 ( J57-43H ENGINE )  
 ( FAR FIELD NOISE )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATIONS: )  
 ( ) OMEGA 1.4 )  
 ( TEST 75-002-010 )  
 ( RUN 02 )  
 ( 15 APR 75 )  
 ( PAGE 14 )

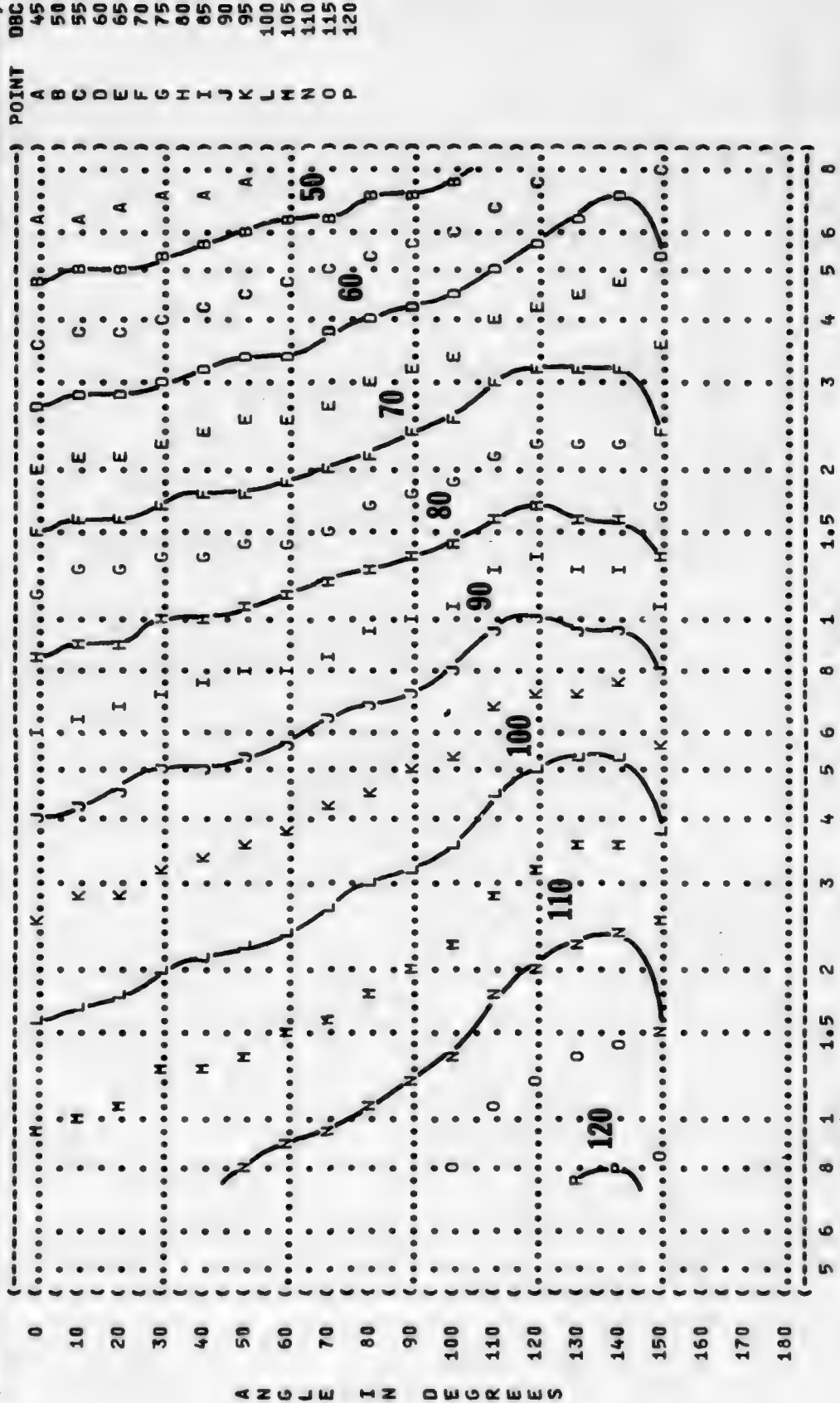


FIGURE: C-WEIGHTED OVERALL SOUND LEVEL (OASLC)  
 6  
 EQUAL LEVEL CONTOURS (OBC)

IDENTIFICATIONS:  
 OMEGA 1.4  
 TEST 75-002-010  
 RUN 03  
 15 APR 75  
 PAGE 14

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

OPERATION:  
 80% RPM  
 ALL ENGINES  
 FREE FLOW

NOISE SOURCE/SUBJECT:  
 B-52G AIRCRAFT  
 J57-43M ENGINE  
 FAR FIELD NOISE

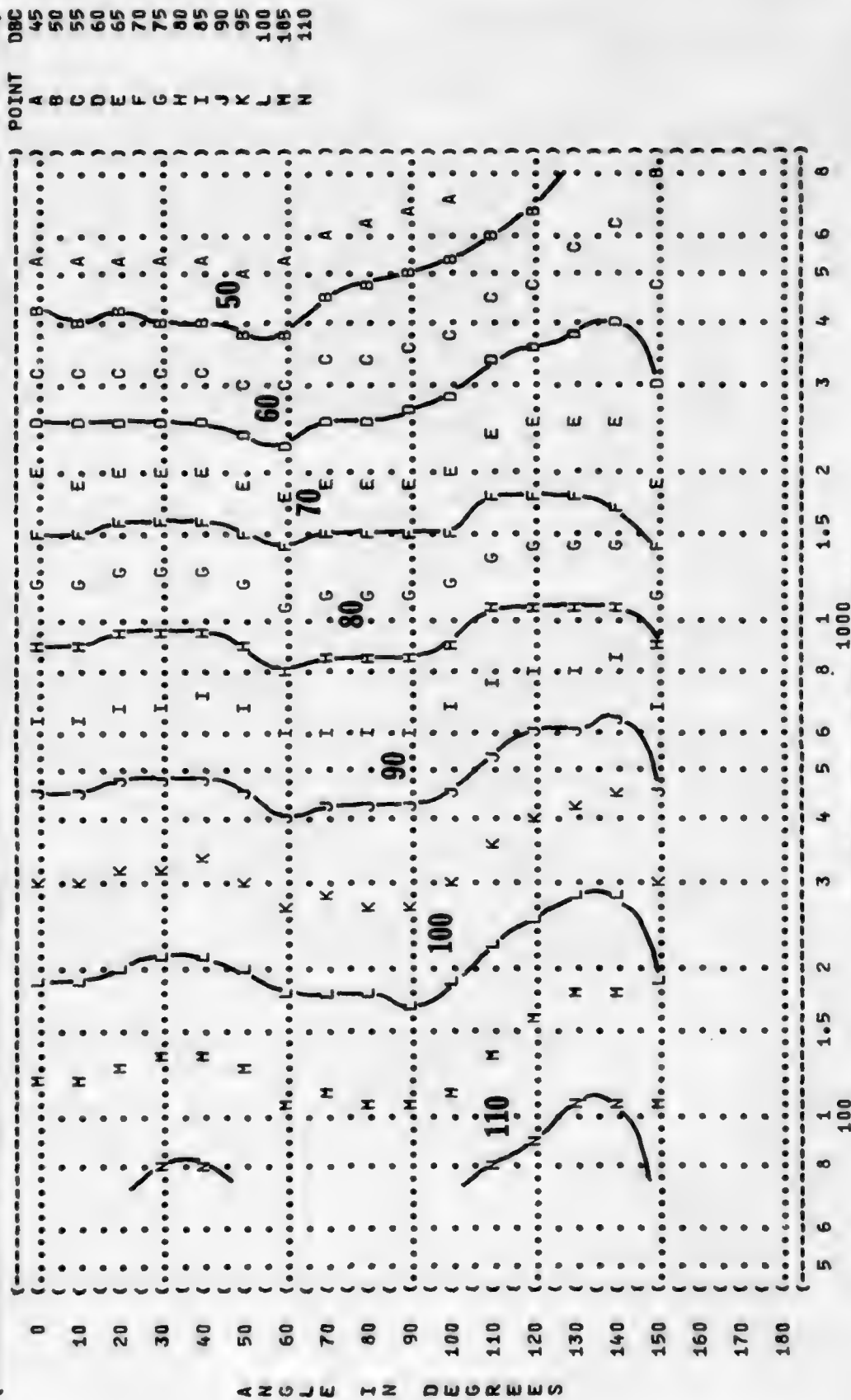




FIGURE 1 C-WEIGHTED OVERALL SOUND LEVEL (OASLC)  
EQUAL LEVEL CONTOURS (OBC)

6

NOISE SOURCE/SUBJECT:

B-52G AIRCRAFT  
J57-43M ENGINE  
FAR FIELD NOISE

OPERATION:

MILITARY POWER  
94% RPM  
ALL ENGINES  
FREE FLOW

METEOROLOGY:

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

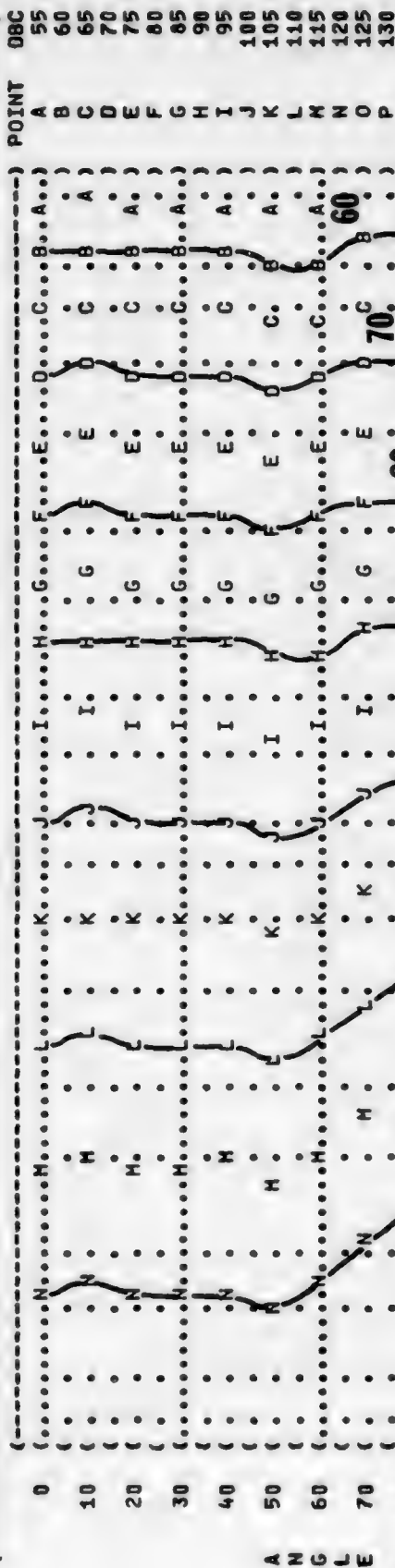
TEST 75-002-010

RUN 05  
15 APR 75

PAGE 14

IDENTIFICATION:

OMEGA 1.4







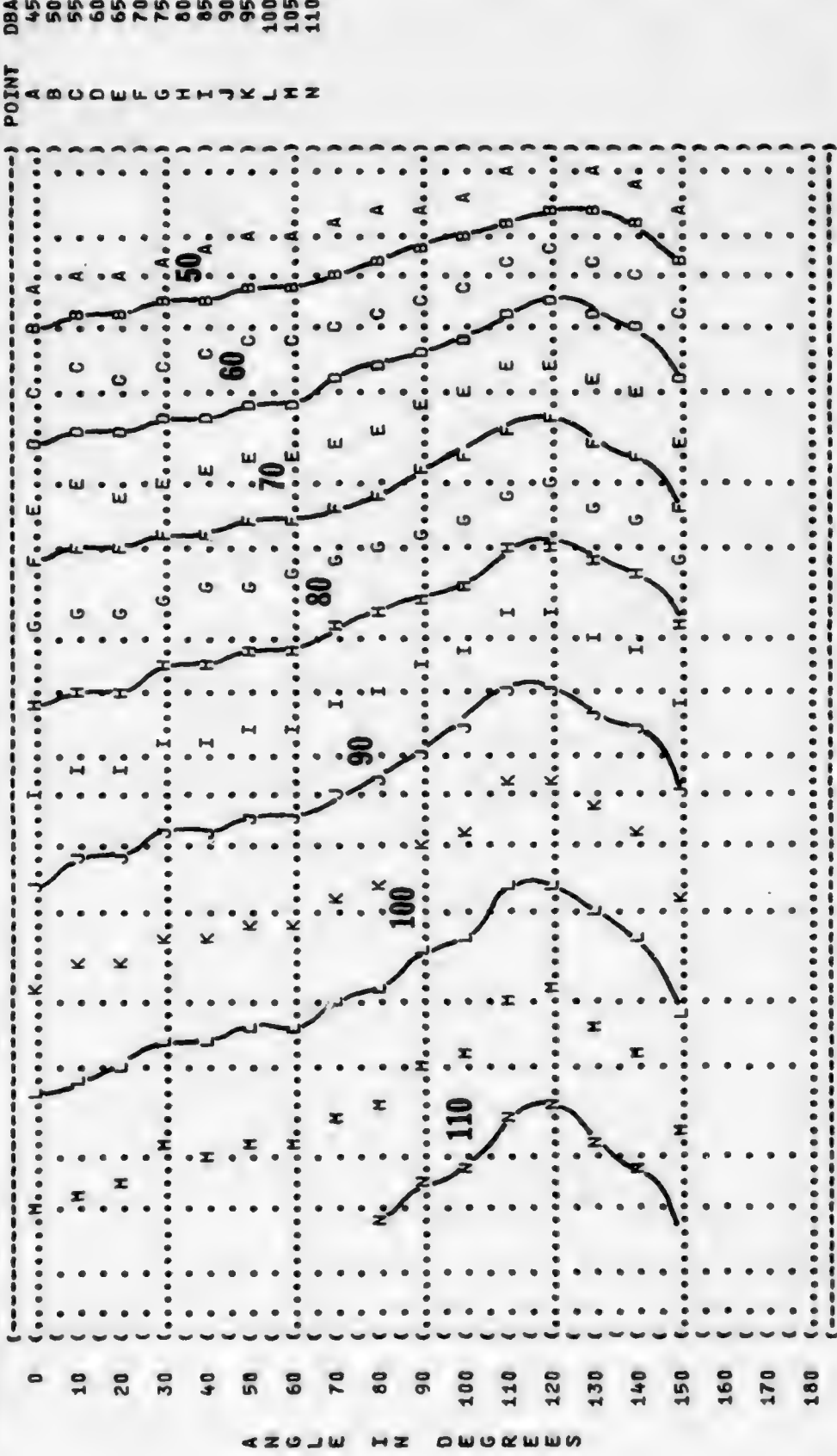


IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-010  
 RUN 02  
 15 APR 75  
 PAGE 15

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

OPERATION:  
 90% RPM ENGINE NO. 4  
 IDLE POWER  
 61% RPM ALL OTHER ENGINES  
 FREE FLOW

NOISE SOURCE/SUBJECT:  
 B-52G AIRCRAFT  
 J57-43M ENGINE  
 FAR FIELD NOISE



POINT DBA  
 A 45  
 B 50  
 C 55  
 D 60  
 E 65  
 F 70  
 G 75  
 H 80  
 I 85  
 J 90  
 K 95  
 L 100  
 M 105  
 N 110

DISTANCE FROM SOURCE (METERS)

7

8-52G AIRCRAFT  
J57-43W ENGINE  
FAR FIELD NOISE

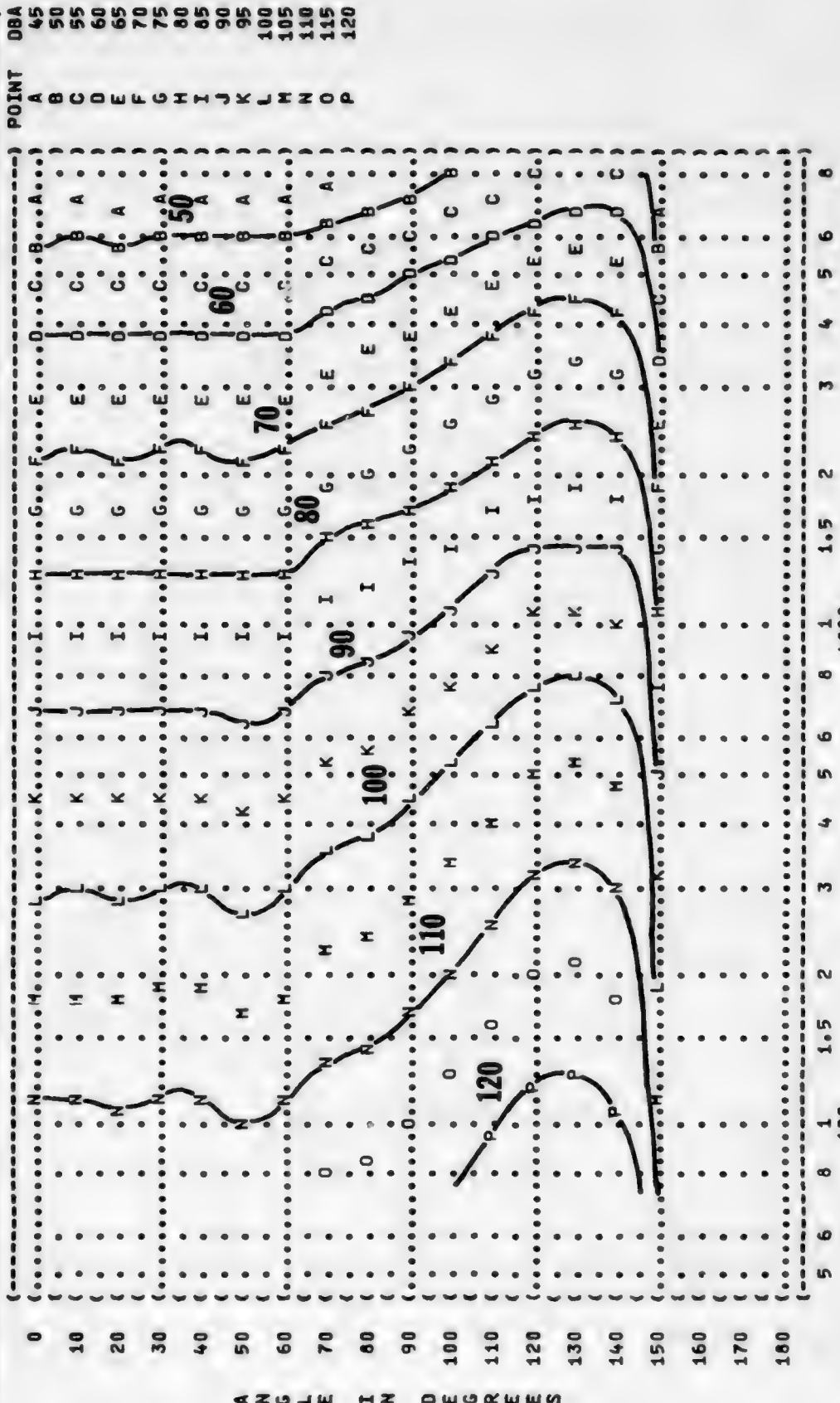
80% RPM  
ALL ENGINES  
FREE FLOW

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

IDENTIFICATION:  
OMEGA 1.4  
TEST 75-002-01



( FIGURE: A-WEIGHTED OVERALL SOUND LEVEL (OASLA)  
 ( 7  
 ( EQUAL LEVEL CONTOURS (DBA)  
 ( ) IDENTIFICATION: )  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-010  
 ( ) RUN 04  
 ( ) METEOROLOGY: )  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) 15 APR 75  
 ( ) PAGE 15  
 ( ) NOISE SOURCE/SUBJECT: )  
 ( ) OPERATION: )  
 ( ) 90% RPM  
 ( ) ALL ENGINES  
 ( ) FREE FLOW  
 ( ) 8-52G AIRCRAFT  
 ( ) J57-43M ENGINE  
 ( ) FAR FIELD NOISE



( FIGURE: A-WEIGHTED OVERALL SOUND LEVEL (OASLA)  
 ( 7 EQUAL LEVEL CONTOURS (DBA)  
 ( ) IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-010  
 ( ) RUN 05  
 ( ) 15 APR 75  
 ( ) PAGE 15  
 ( NOISE SOURCE/SUBJECT: ) METEOROLOGY:  
 ( ) OPERATION: )  
 ( ) MILITARY POWER )  
 ( ) 94% RPM )  
 ( ) ALL ENGINES )  
 ( ) FREE FLOW )  
 ( )  
 ( B-52G AIRCRAFT )  
 ( J57-43M ENGINE )  
 ( FAR FIELD NOISE )

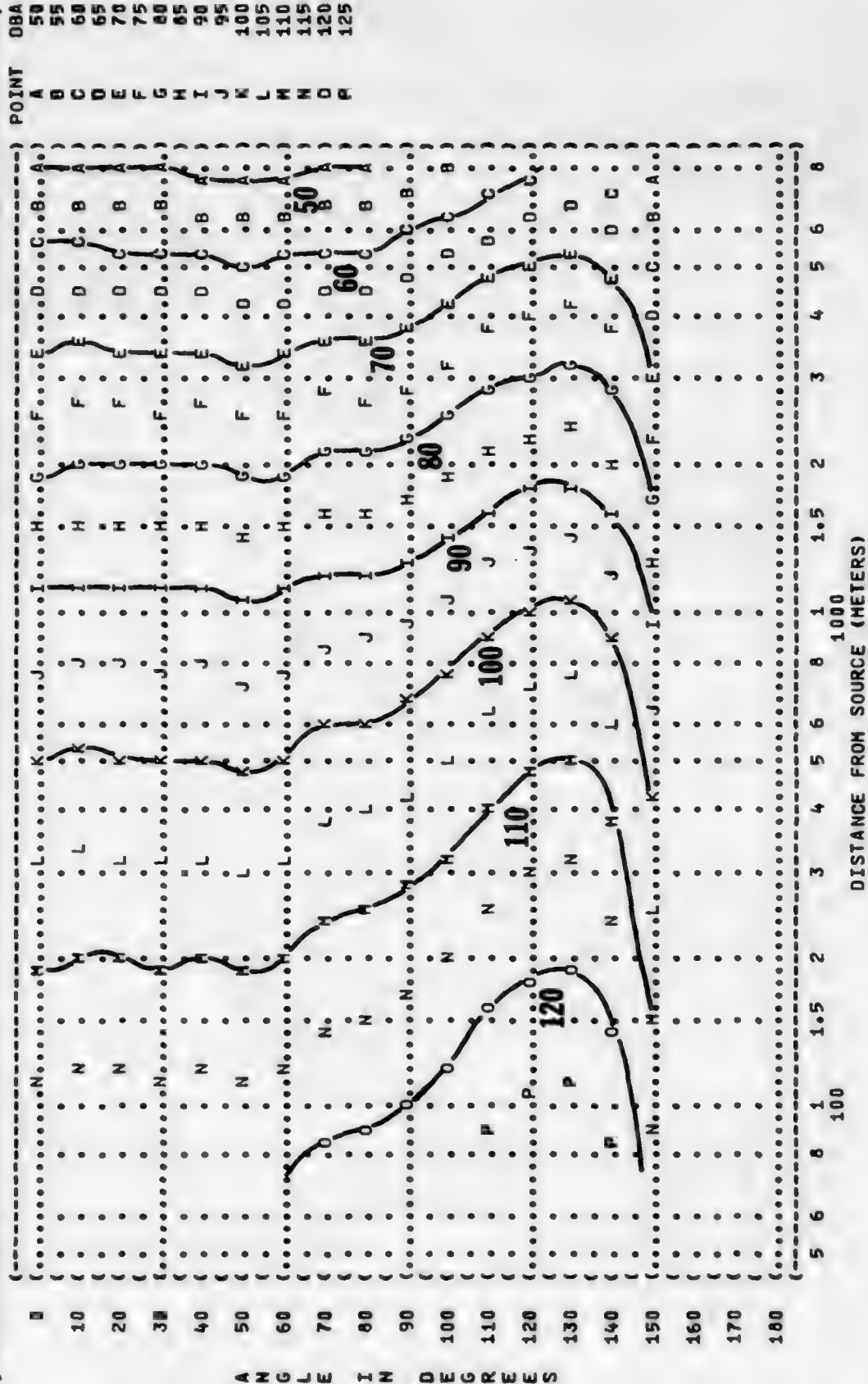


Figure 1 is a graph showing the dependence of the number of points PND on the number of points A. The x-axis is labeled "POINT A" and ranges from 0 to 50. The y-axis is labeled "POINT PND" and ranges from 60 to 115. There are four data series labeled 60, 70, 80, and 90. Each series consists of a series of points connected by lines. The points are labeled with letters A through L. The series 60 starts at (0, 60) and ends at (50, 115). The series 70 starts at (0, 70) and ends at (50, 115). The series 80 starts at (0, 80) and ends at (50, 115). The series 90 starts at (0, 90) and ends at (50, 115).

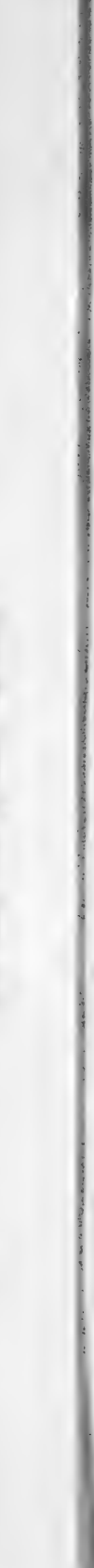




FIGURE: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION  
EQUAL LEVEL CONTOURS (PNDB)

## IDENTIFICATION:

**OMEGA 1.4**

TEST 75-002-010

**RUN 02**

TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

**PAGE 16**

{ OPERATION:

90% RPM ENGINE NO. 4

**IDLE POWER**

**61% RPM ALL OTHER ENGINES**

**FREE FLOW**

NOISE SOURCE/SUBJECT:

**B-52G AIRCRAFT**

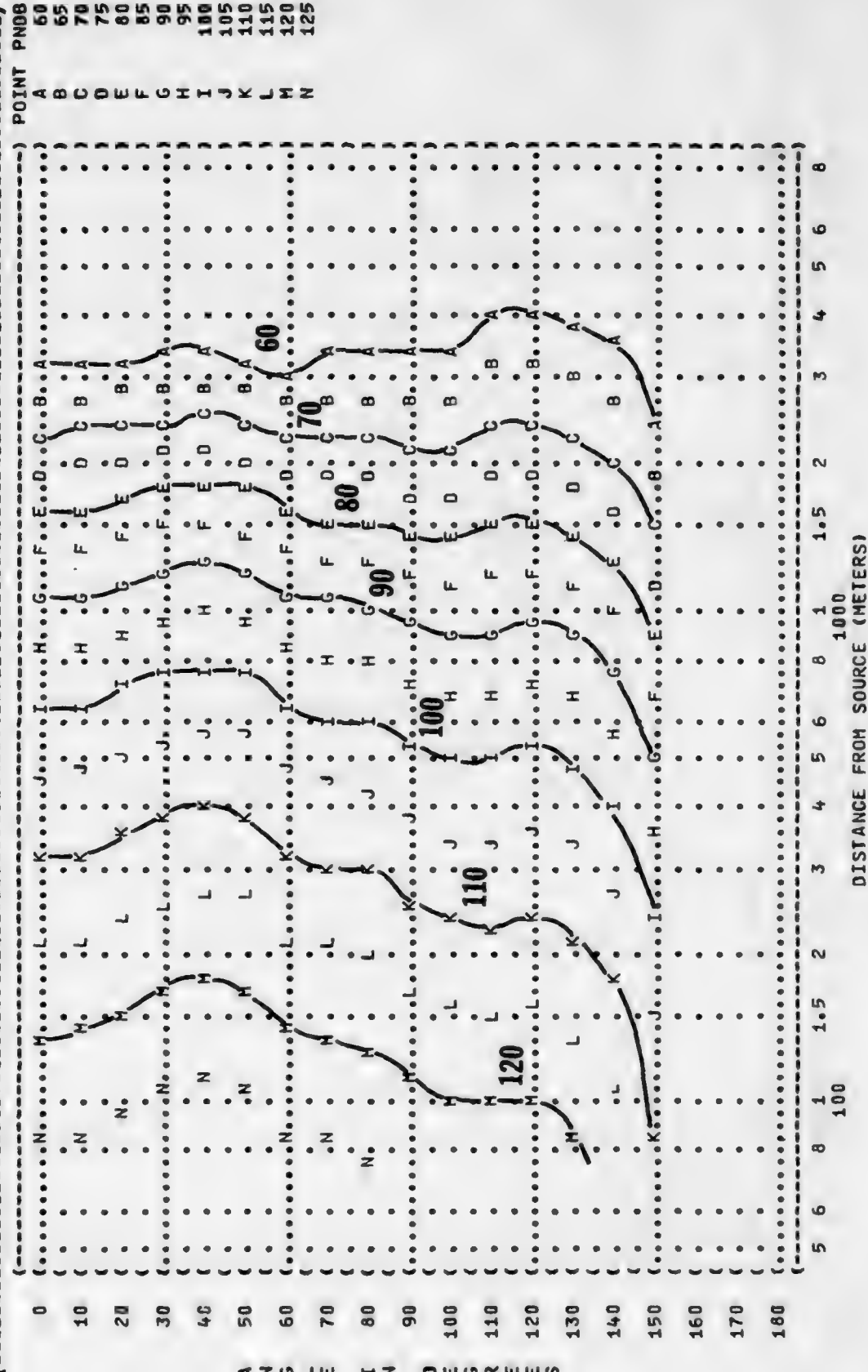
**J57-43H ENGINE**



DISTANCE FROM SOURCE (METERS)

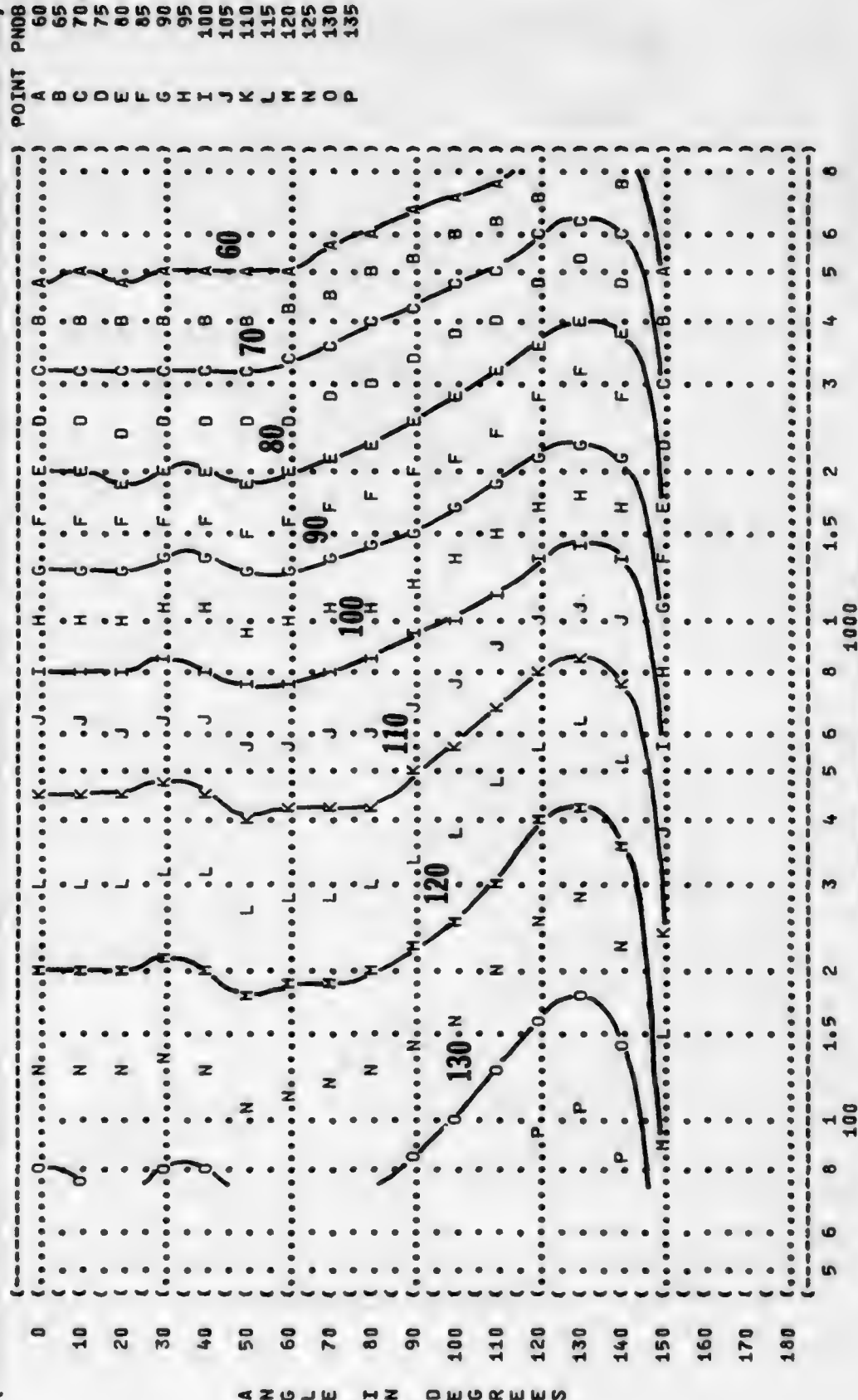


POINT	PNOB
A	50
B	65
C	70
D	75
E	80
F	85
G	90
H	95
I	100
J	105
K	110
L	115
M	120
N	125



ANGLE IN DEGREES

( ( FIGURE: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) ) )  
 ( ( 8 EQUAL LEVEL CONTOURS (PNDB) ) )  
 ( ( NOISE SOURCE/SUBJECT: ) )  
 ( ( ( OPERATION: ) )  
 ( ( ( 90% RPM ) )  
 ( ( ( ALL ENGINES ) )  
 ( ( ( FREE FLOW ) )  
 ( ( ( TEMPERATURE = 15 C ) )  
 ( ( ( BAR PRESS = .760 M HG ) )  
 ( ( ( REL HUMID = 70 % ) )  
 ( ( ( OMEGA 1.4 ) )  
 ( ( ( TEST 75-002-010 ) )  
 ( ( ( RUN 04 ) )  
 ( ( ( 15 APR 75 ) )  
 ( ( ( PAGE 16 ) )



**FIGURE 8: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION {PNLT} EQUAL LEVEL CONTOURS (PNDB)**

8

NOISE SOURCE/SUBJECT:

( OPERATION:

## ● METEOROLOGY:

B-52G AIRCRAFT  
J57-43W ENGINE  
FAR FIELD NOISE

( MILITARY POWER  
( 94% RPM  
( ALL ENGINES  
( FREE FLOW

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

## IDENTIFICATION

**OMEGA 1.4**

TEST 75-002-010

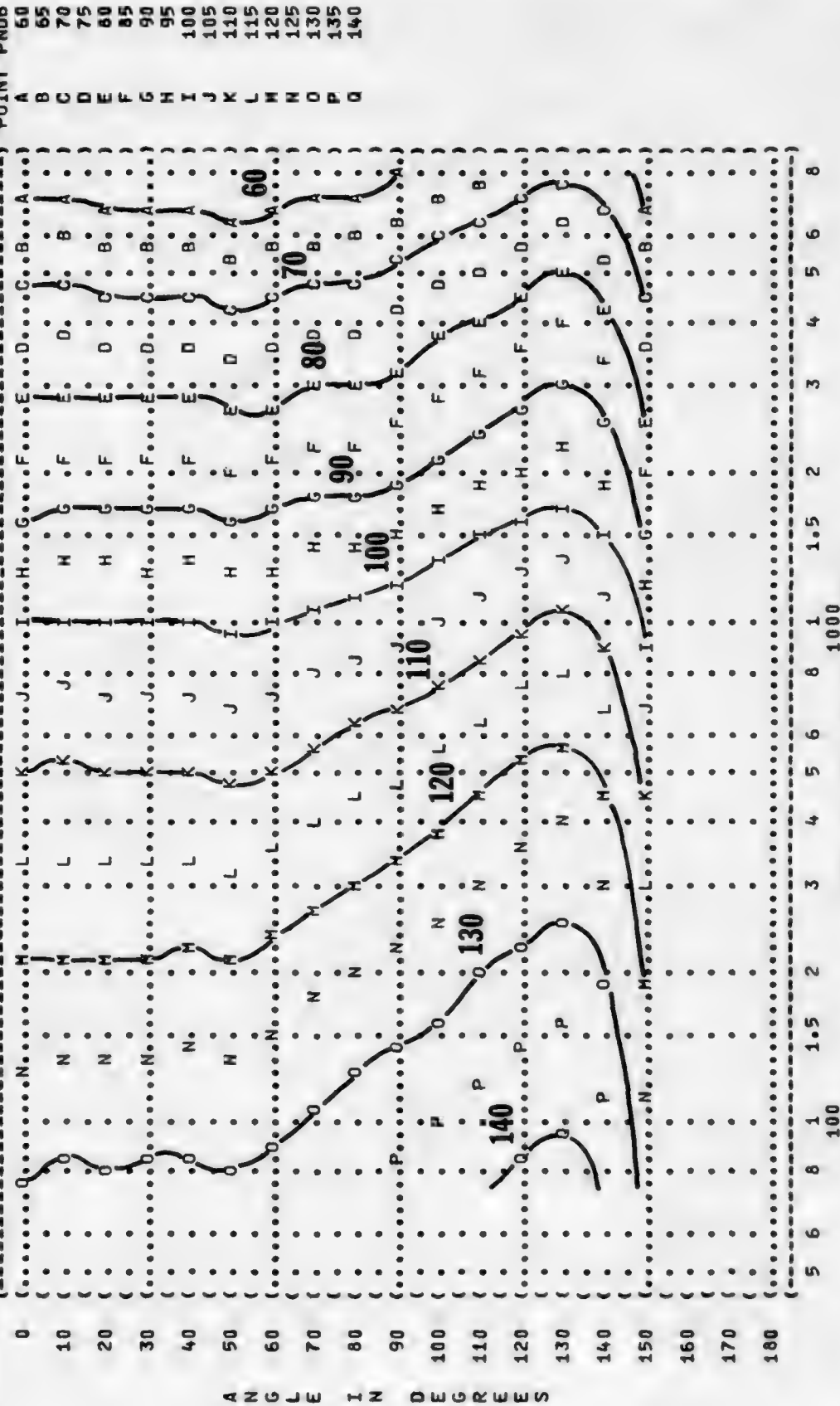
RUN 05

15 APR 75

4

**PAGE 16**

SECRET

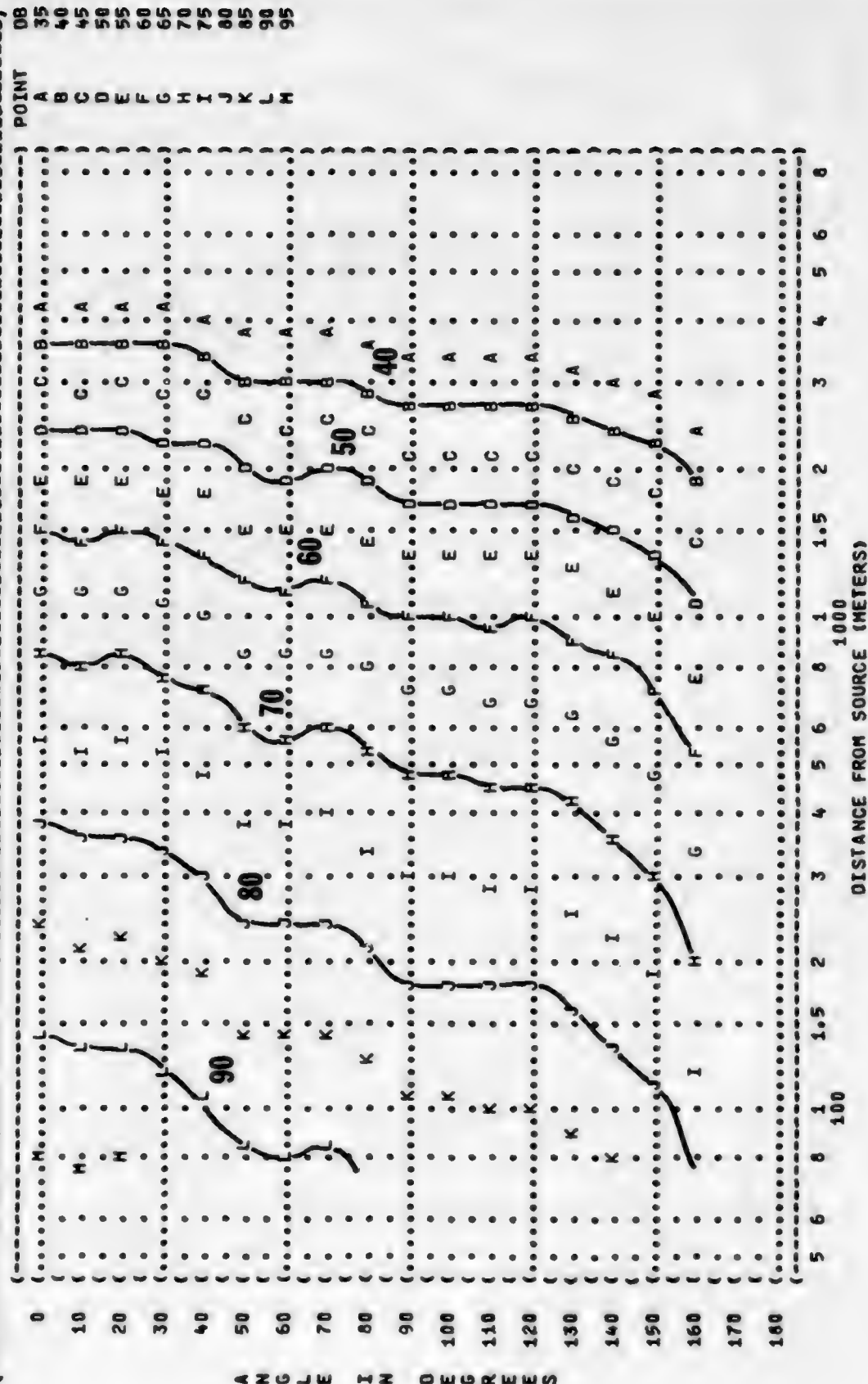


DISTANCE FROM SOURCE (METERS)

```

( ( FIGURE: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)
( ( EQUAL LEVEL CONTOURS (DB)
( ( 9
( (
( ( NOISE SOURCE/SUBJECT:
( ( ( OPERATION:
( ( ( IDLE POWER
( ( ( 61% RPM
( ( ( ALL ENGINES
( ( ( FREE FLOW
( (
( ( METEOROLOGY:
( ( TEMP = 15 C
( ( BAR PRESS = .760 M HG
( ( REL HUMID = 70 %
( (
( ( IDENTIFICATION:
( ( )
( ( OMEGA 1.4
( ( TEST 75-002-010
( ( ) RUN 01
( ( )
( ( ) 15 APR 75
( ( )
( ( ) PAGE 17
( ( )

```



```

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-010
RUN 02
15 APR 75
PAGE 17

```

## METEOROLOGY:

TEMP = 15 C  
BAR PRESS = .760 H HG  
REL HUMID = 70 %

BAR PRESS = .760 H HG  
REL HUMID = 70 %

100

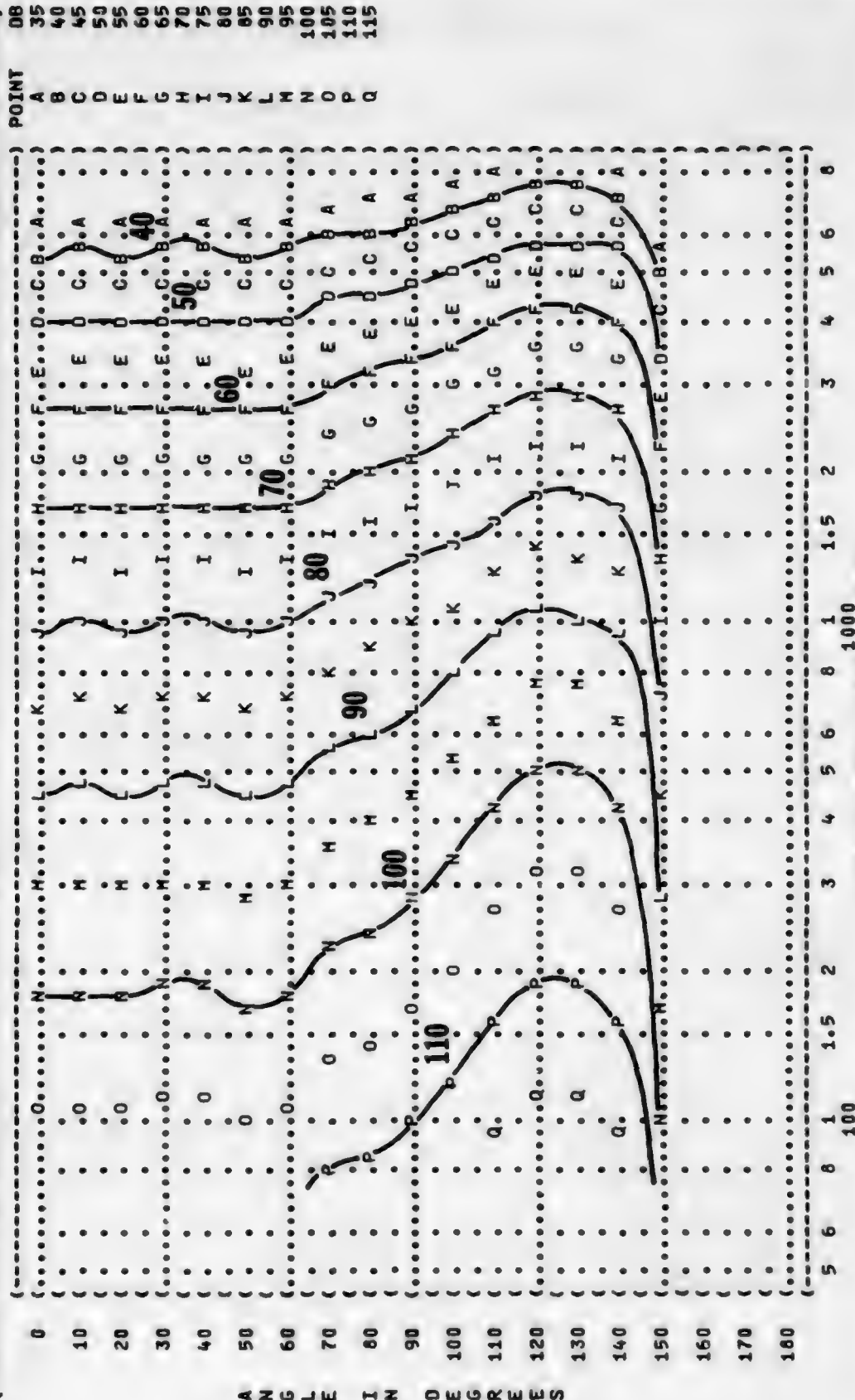








( ( FIGURE: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)  
 ( ( 9  
 ( ( IDENTIFICATION:  
 ( ( OMEGA 1.4  
 ( ( TEST 75-002-010  
 ( ( RUN 04  
 ( ( NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY:  
 ( ( B-52G AIRCRAFT ) TEMP = 15 C  
 ( ( J57-43H ENGINE ) BAR PRESS = .760 H HG  
 ( ( FAR FIELD NOISE ) ALL ENGINES ) REL HUMID = 70 %  
 ( ( ) FREE FLOW )  
 ( ( ) PAGE 17 )



**IDENTIFICATIONS:**

# OMEGA 1.4

## METEOROLOGY:

TEMP = 15 C

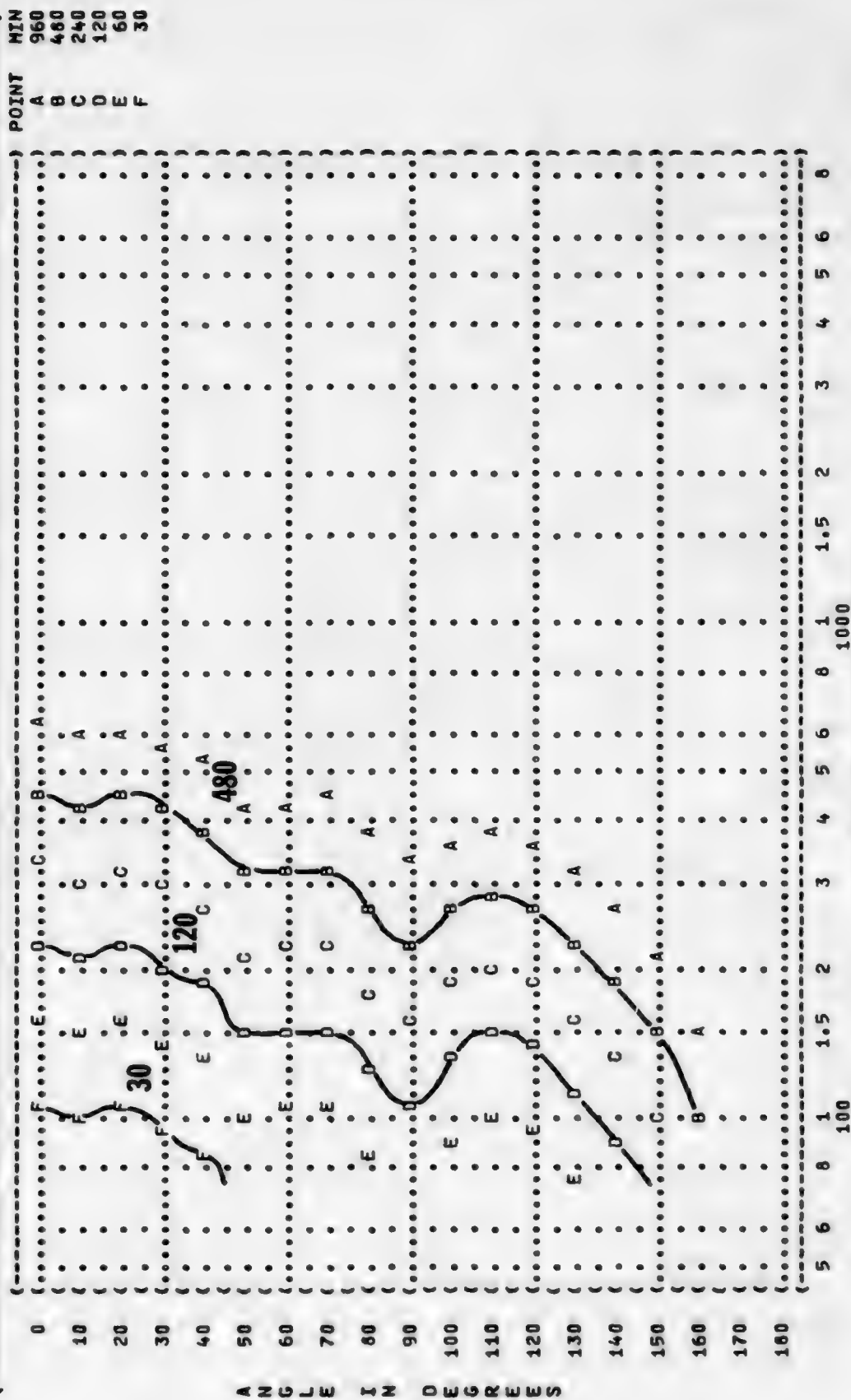
BAR PRESS = .760 H HG

REL HUMID = 70 %

**PAGE 17**



NOISE SOURCE/SUBJECT:  
B-52G AIRCRAFT  
J57-43W ENGINE  
FAR FIELD NOISE



1000

FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

IDENTIFICATION:

10

NOISE SOURCE/SUBJECT:

OPERATION:

8-52G AIRCRAFT

J57-43W ENGINE

FAR FIELD NOISE

IDEAL POWER

61% RPM

ALL ENGINES

FREE FLOW

METEOROLOGY:

TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

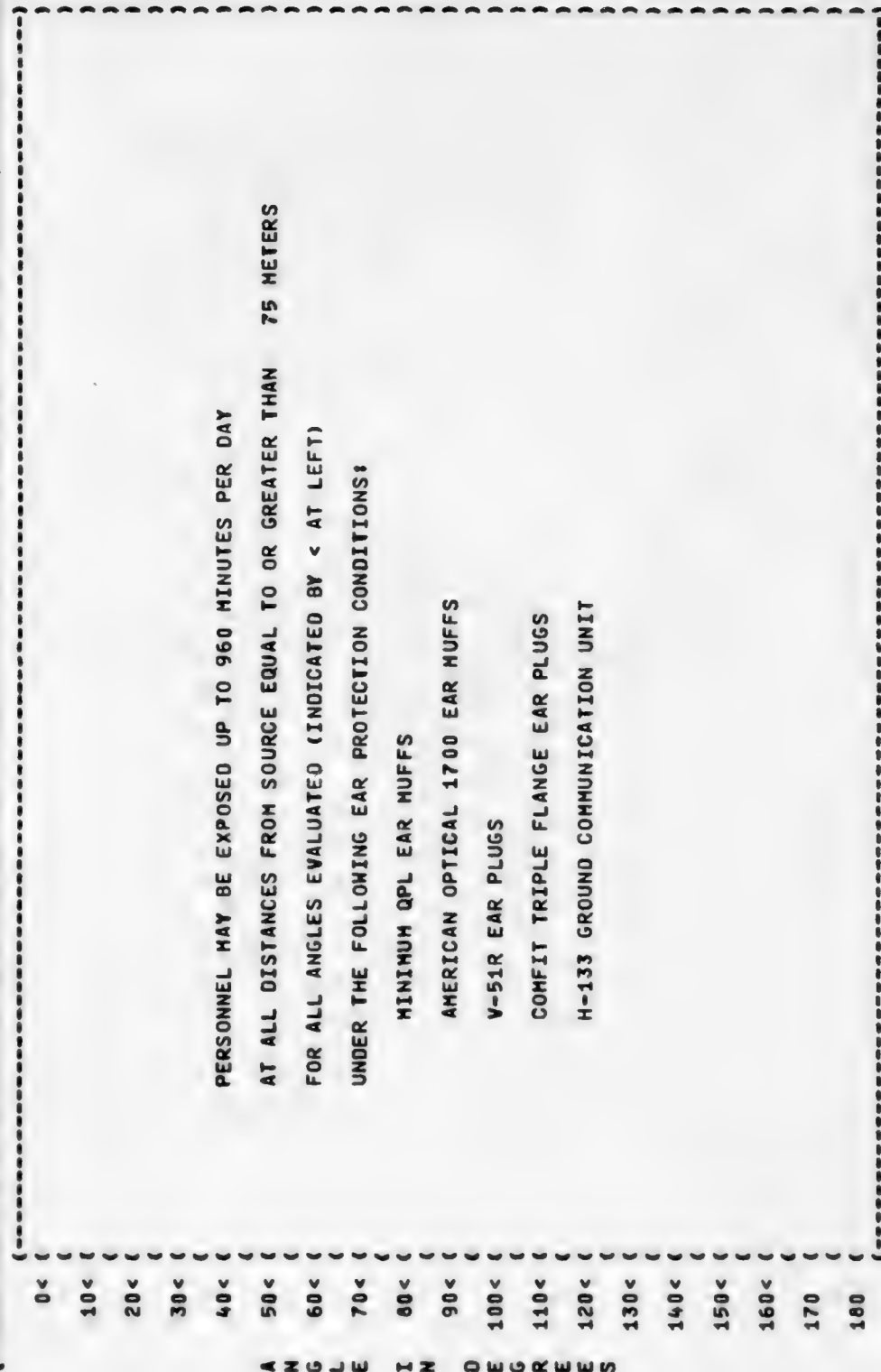
OMEGA 1.4

TEST 75-002-010

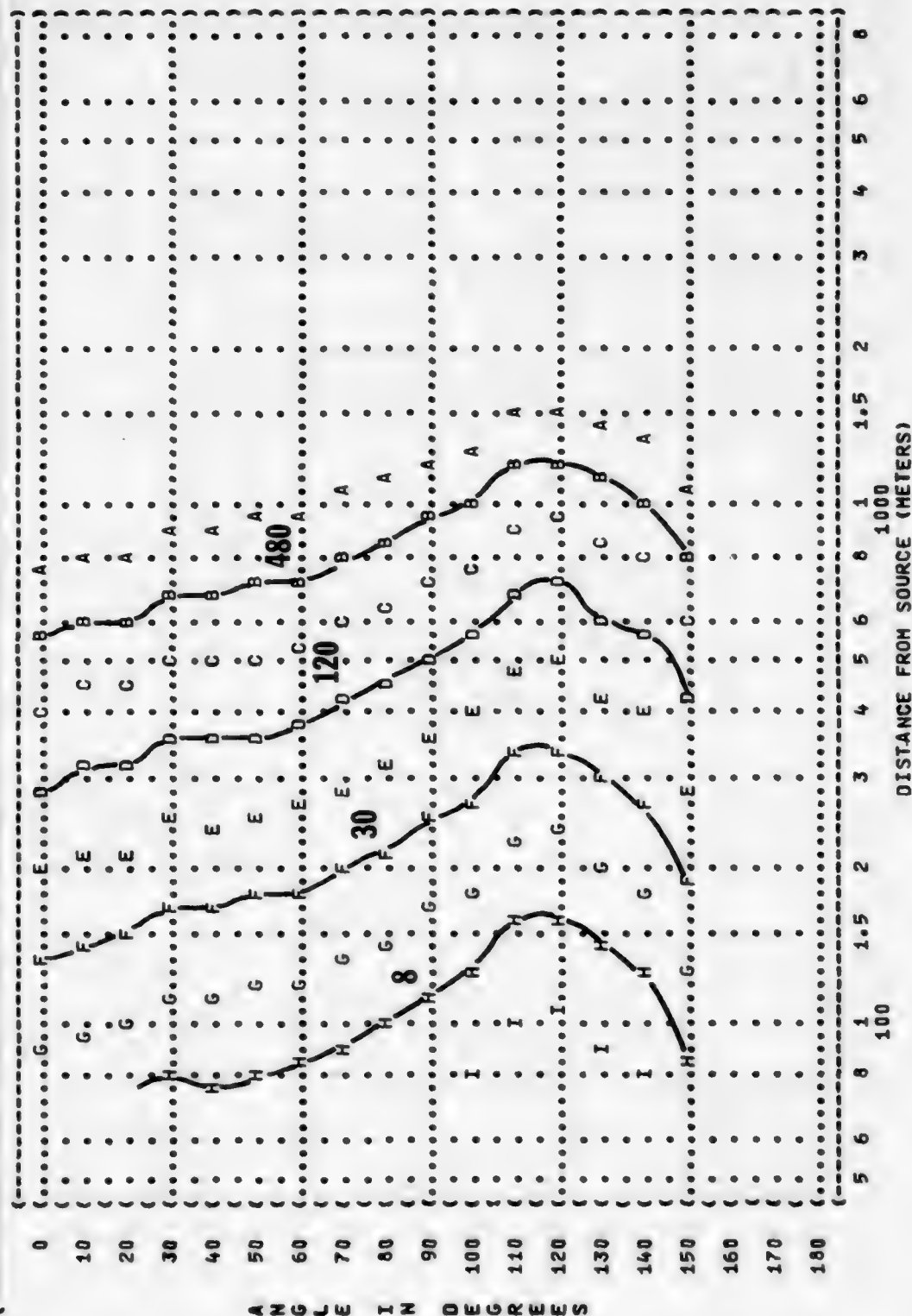
RUN 01

15 APR 75

PAGE 8



DISTANCE FROM SOURCE (METERS)

[illegible]

POINT	MIN
A	960
B	480
C	240
D	120
E	60

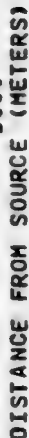






FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

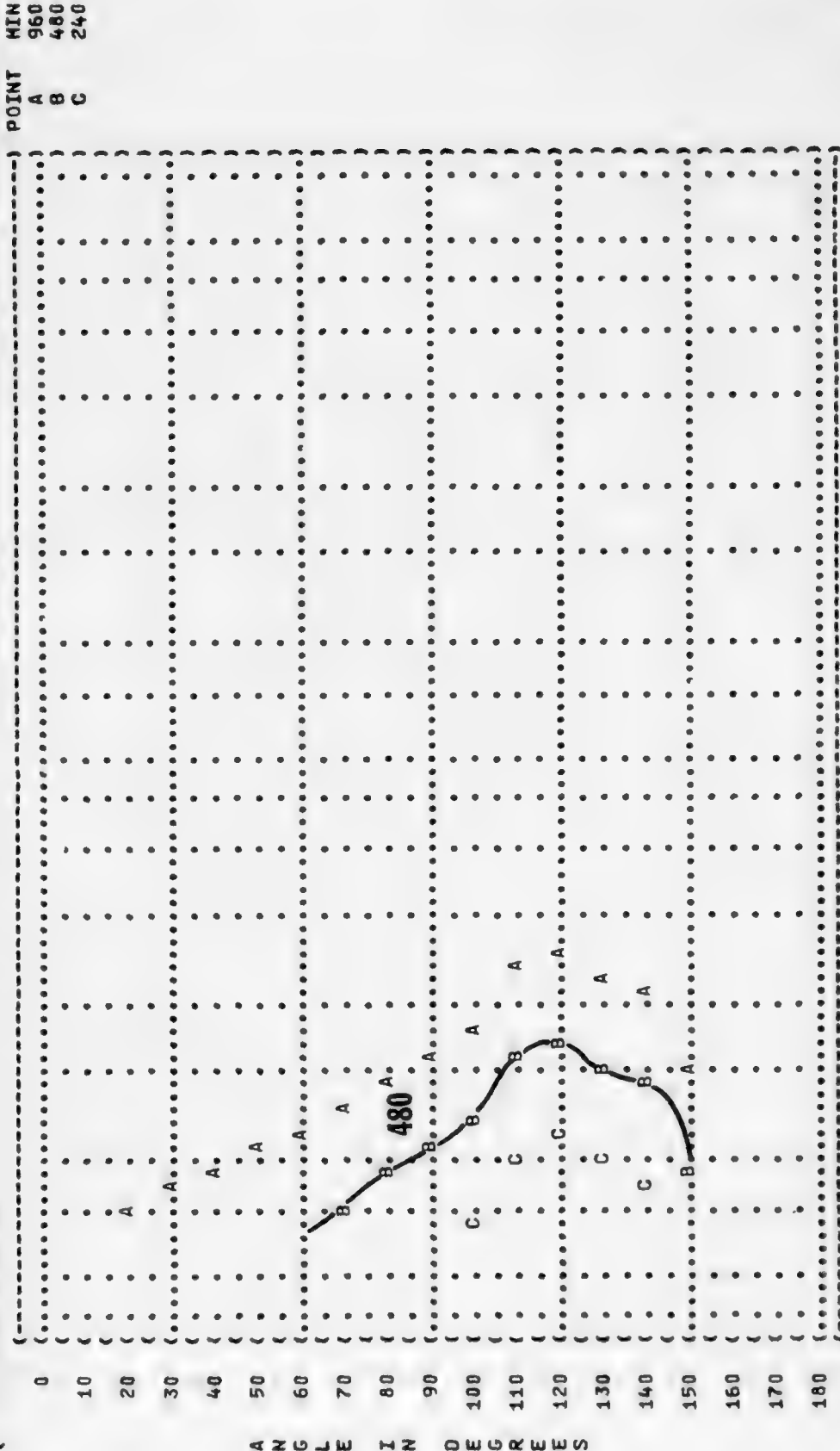
10 EQUAL TIME CONTOURS (MINUTES)

V-51R EAR PLUGS

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: ( TEMP = 15 C )  
 ( 90% RPM ENGINE NO. 4 )  
 ( IDLE POWER ) BAR PRESS = .760 M HG  
 ( 61% RPM ALL OTHER ENGINES ) REL HUMID = 70 %  
 ( FREE FLOW )

B-52G AIRCRAFT  
 J57-43M ENGINE  
 FAR FIELD NOISE

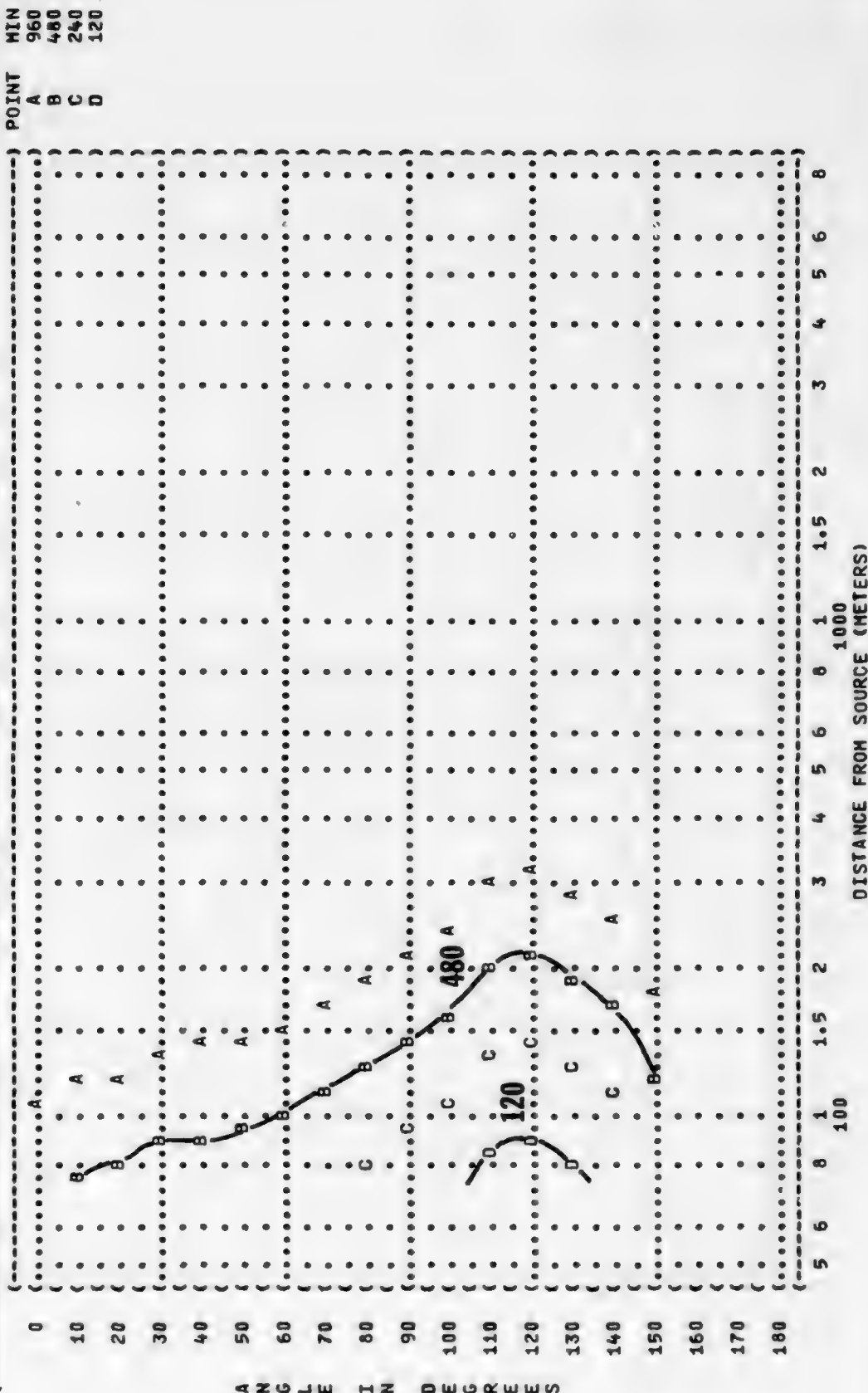
OMEGA 1.4  
 TEST 75-002-010  
 RUN 02  
 15 APR 75  
 PAGE 10



ANGLE IN DEGREES

DISTANCE FROM SOURCE (METERS)

( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION: )  
 ( 10 EQUAL TIME CONTOURS (MINUTES) ) )  
 ( COMFIT TRIPLE FLANGE EAR PLUGS ) )  
 ( NOISE SOURCE/SUBJECT: ) OPERATION: ) METEOROLOGY: )  
 ( ( 90% RPM ENGINE NO. 4 ) ) TEMP = 15 C )  
 ( ( IDLE POWER ) ) BAR PRESS = .760 M HG )  
 ( ( 61% RPM ALL OTHER ENGINES ) ) REL HUMID = 70 % )  
 ( ( FREE FLOW ) ) )  
 ( B-52G AIRCRAFT )  
 ( J57-43M ENGINE ) 15 APR 75 )  
 ( FAR FIELD NOISE ) ) PAGE 11 )



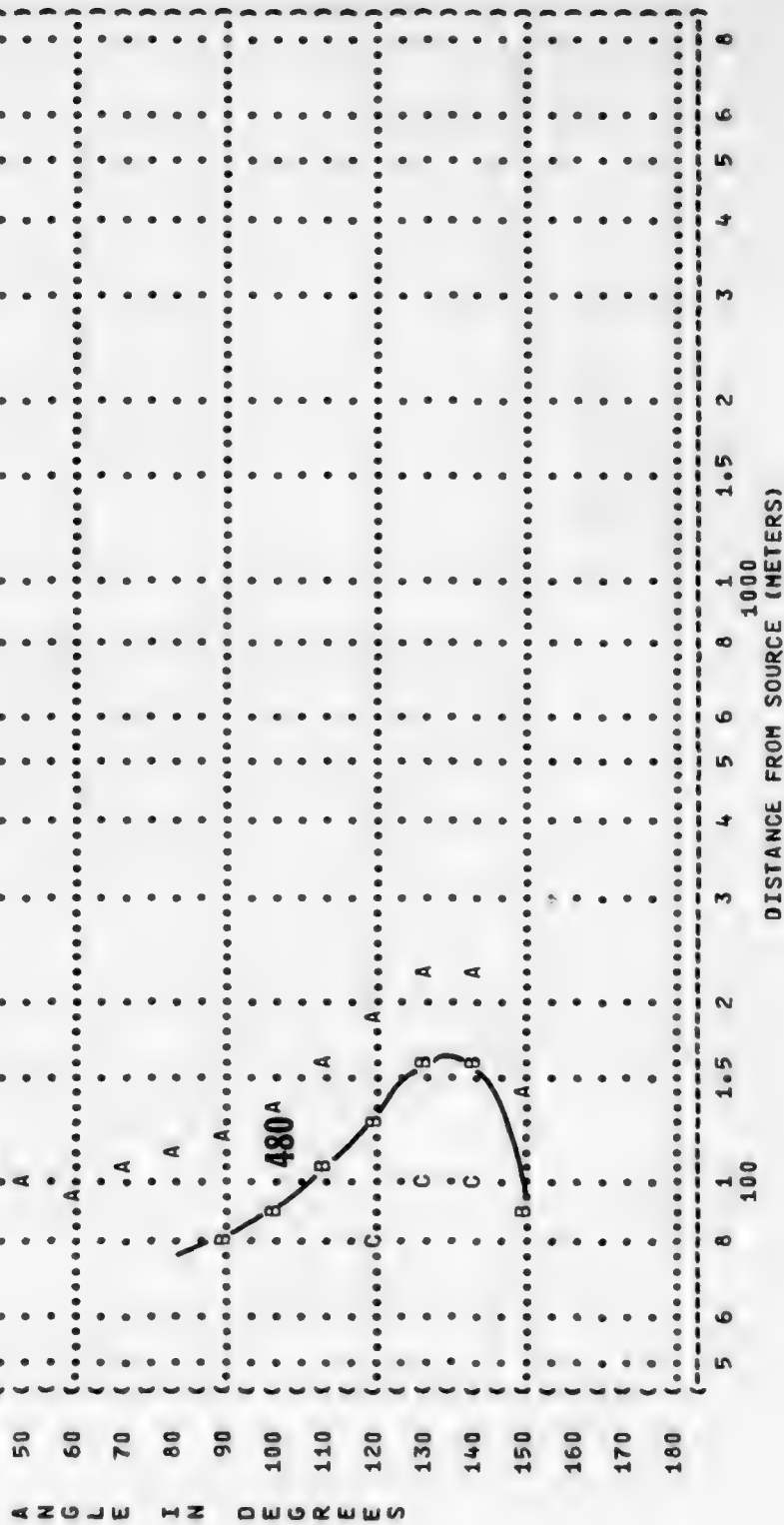
A N G L E I N D E G R E E S





```
(( FIGURE: MAXIMUM PERMISSIBLE TIME {T} FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION:
(( EQUAL TIME CONTOURS (MINUTES) ) )
(( MINIMUM QPL EAR MUFFS ) ) OMEGA 1.4
----- TEST 75-002-010
(( NOISE SOURCE/SUBJECT: ) OPERATION: ) METEOROLOGY: ) RUN 03
(( ) ) TEMP = 15 C ) )
(( B-52G AIRCRAFT ) 80% RPM ) BAR PRESS = .760 H HG ) )
(( J57-43H ENGINE ) ALL ENGINES ) REL HUMID = 70 % ) )
(( FAR FIELD NOISE ) FREE FLOW ) ) PAGE 8
```

	(-----)	HIN	POINT
0	(.....A.....)	A	960
	(.....B.....)	B	480
10	(.....C.....)	C	240





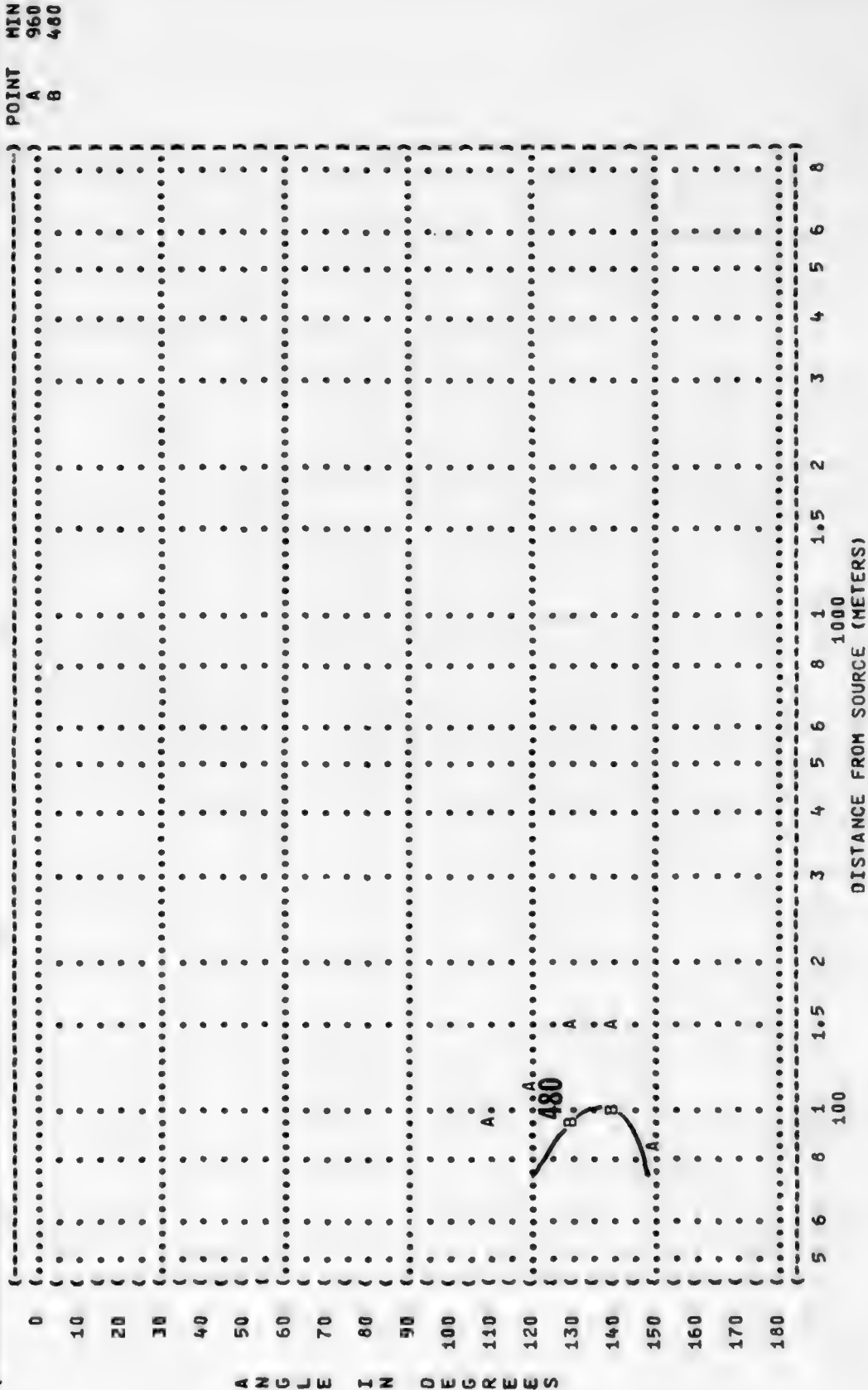








FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

IDENTIFICATION:

10

OMEGA 1.4

TEST 75-002-010

RUN 04

15 APR 75

PAGE 7

NOISE SOURCE/SUBJECT:

OPERATION:

TEMP = 15 C

BAR PRESS = .760 H HG

REL HUMID = 70 %

8-52G AIRCRAFT

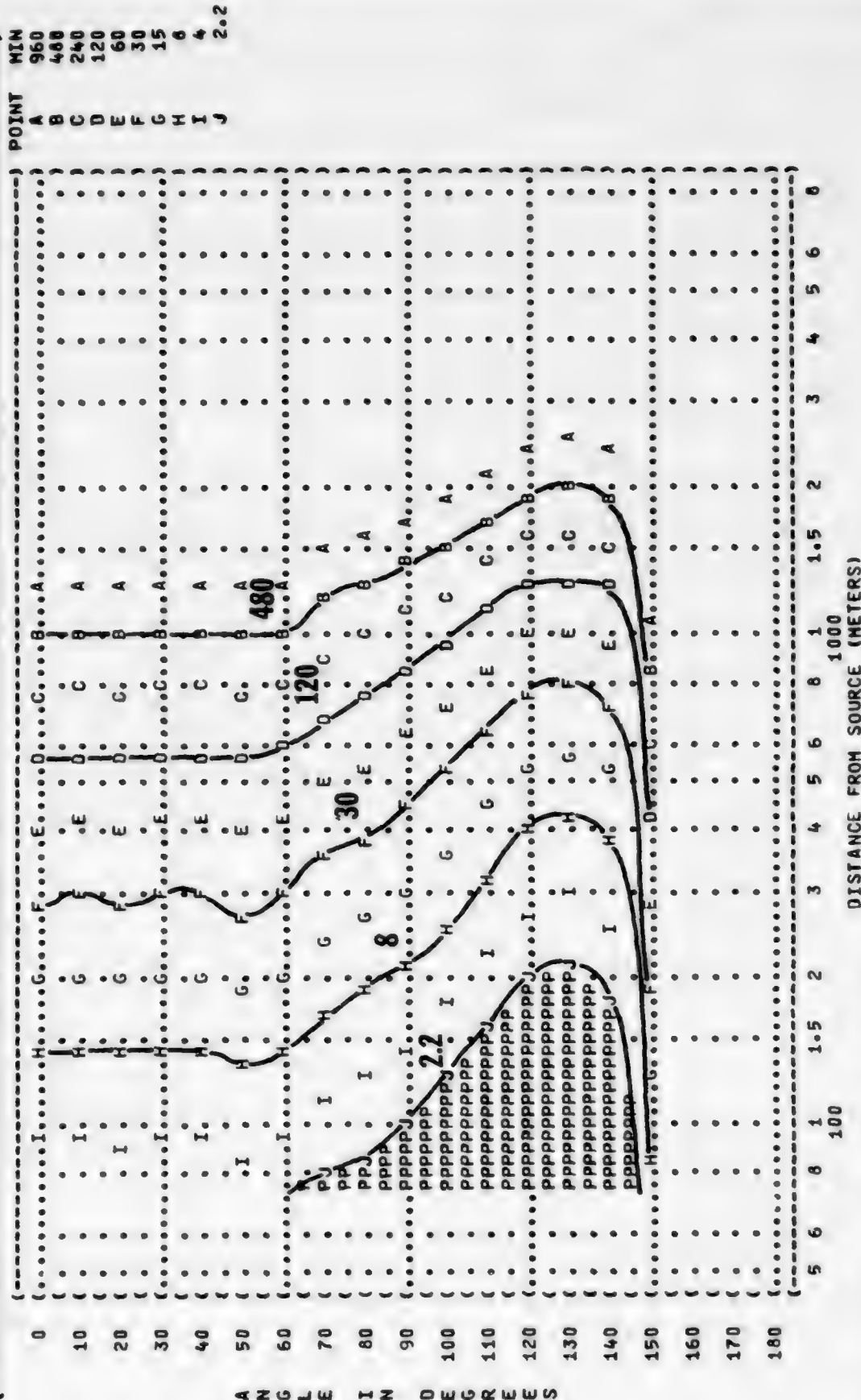
90% RPM

J57-43W ENGINE

ALL ENGINES

FAR FIELD NOISE

FREE FLOW



P ADDITIONAL EAR PROTECTION REQUIRED.

```

(-----)
( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION:
( 10 EQUAL TIME CONTOURS (MINUTES) )
( MINIMUM QPL EAR MUFFS ) OMEGA 1.4
( ) TEST 75-002-010
( NOISE SOURCE/SUBJECT: ) ( OPERATION: ) METEOROLOGY:
( ) ( ) TEMP = 15 C
( 8-52G AIRCRAFT ) ( 90% RPM ) BAR PRESS = .760 M HG
( J57-43W ENGINE ) ( ALL ENGINES ) REL HUMID = 70 %
( FAR FIELD NOISE ) ( FREE FLOW ) PAGE 8
(-----)

```

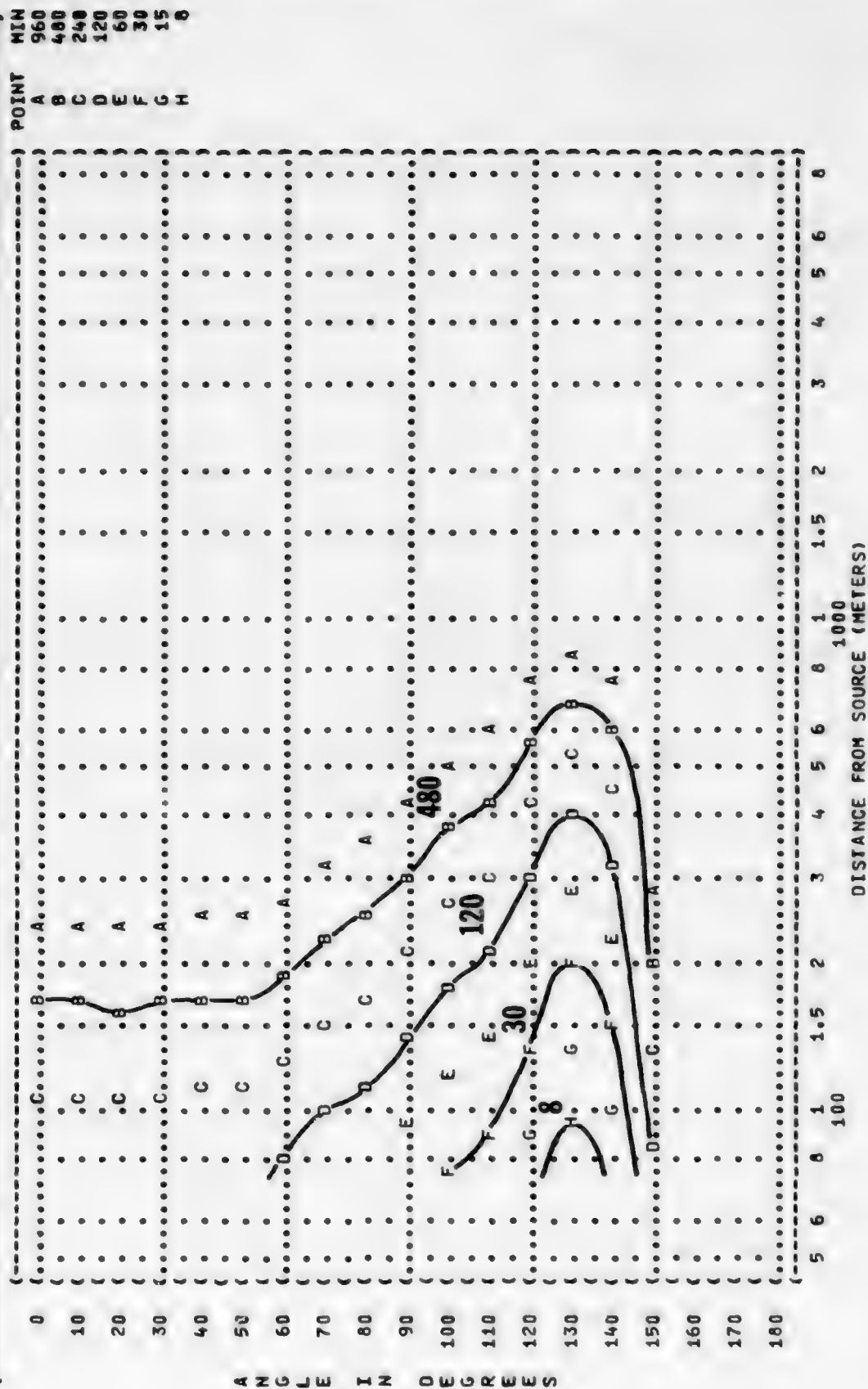


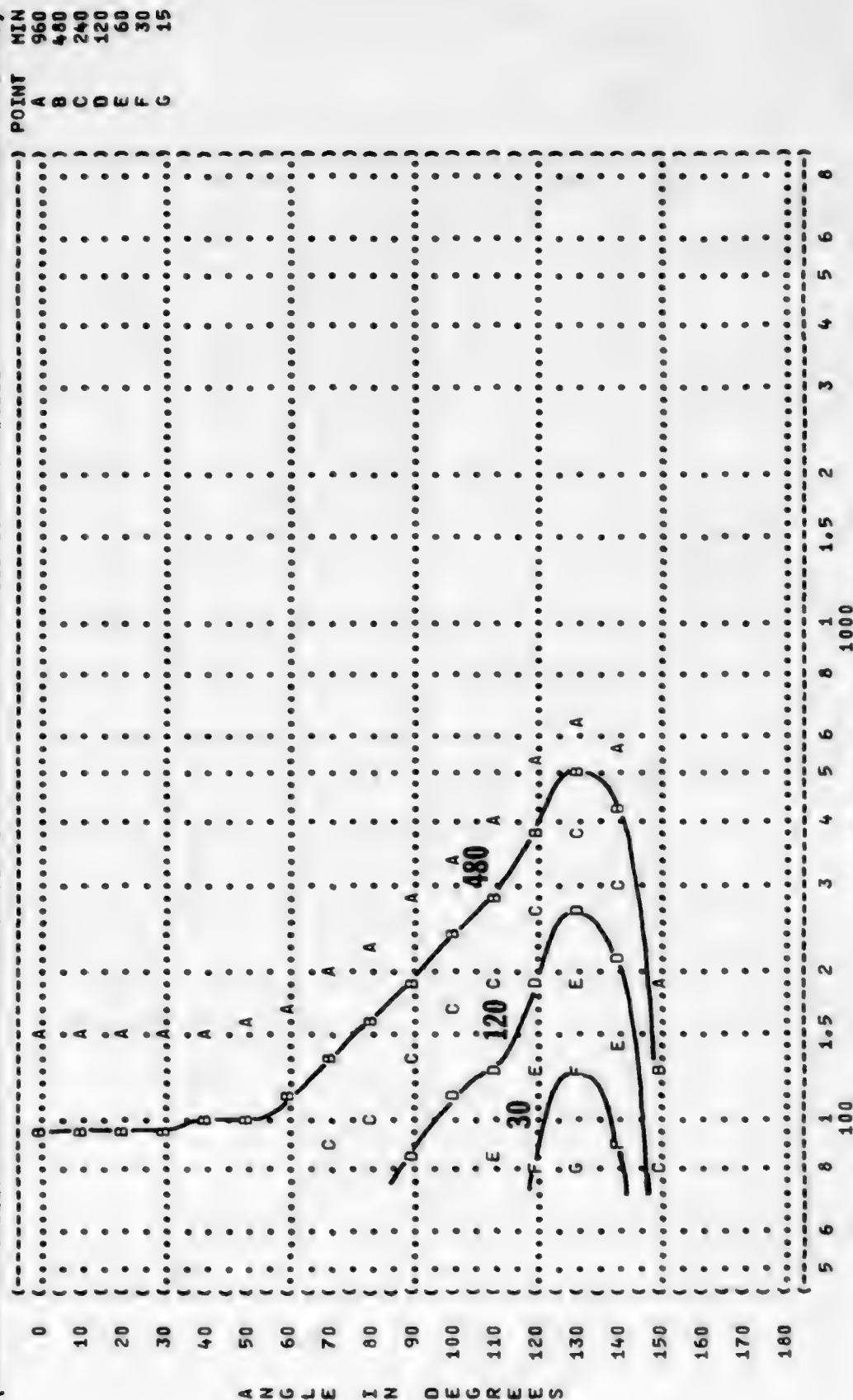


FIGURE 10

	MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)	IDENTIFICATION:
	EQUAL TIME CONTOURS (MINUTES)	)
	AMERICAN OPTICAL 1700 EAR MUFFS	) OMEGA 1.4

NOISE SOURCE/SUBJECT:

B-52G AIRCRAFT	(	90% RPM
J57-43M ENGINE	(	ALL ENGINES
FAR FIELD NOISE	(	FREE FLOW



POINT	MIN
A	960
B	480
C	240
D	120
E	60
F	30





POINT	MIN
A	960
B	480
C	240
D	120
E	60



ANGLE IN DEGREES

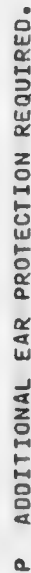
[illegible]

FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) IDENTIFICATION: )  
 10 EQUAL TIME CONTOURS (MINUTES) )  
 MINIMUM QPL EAR MUFFS )  
 NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: )  
 ( MILITARY POWER ) TEMP = 15 C )  
 ( 94% RPM ) BAR PRESS = .760 M HG )  
 ( ALL ENGINES ) REL HUMID = 70 % )  
 ( FREE FLOW ) )  
 B-52G AIRCRAFT )  
 J57-43W ENGINE )  
 FAR FIELD NOISE )  
 PAGE 8 )

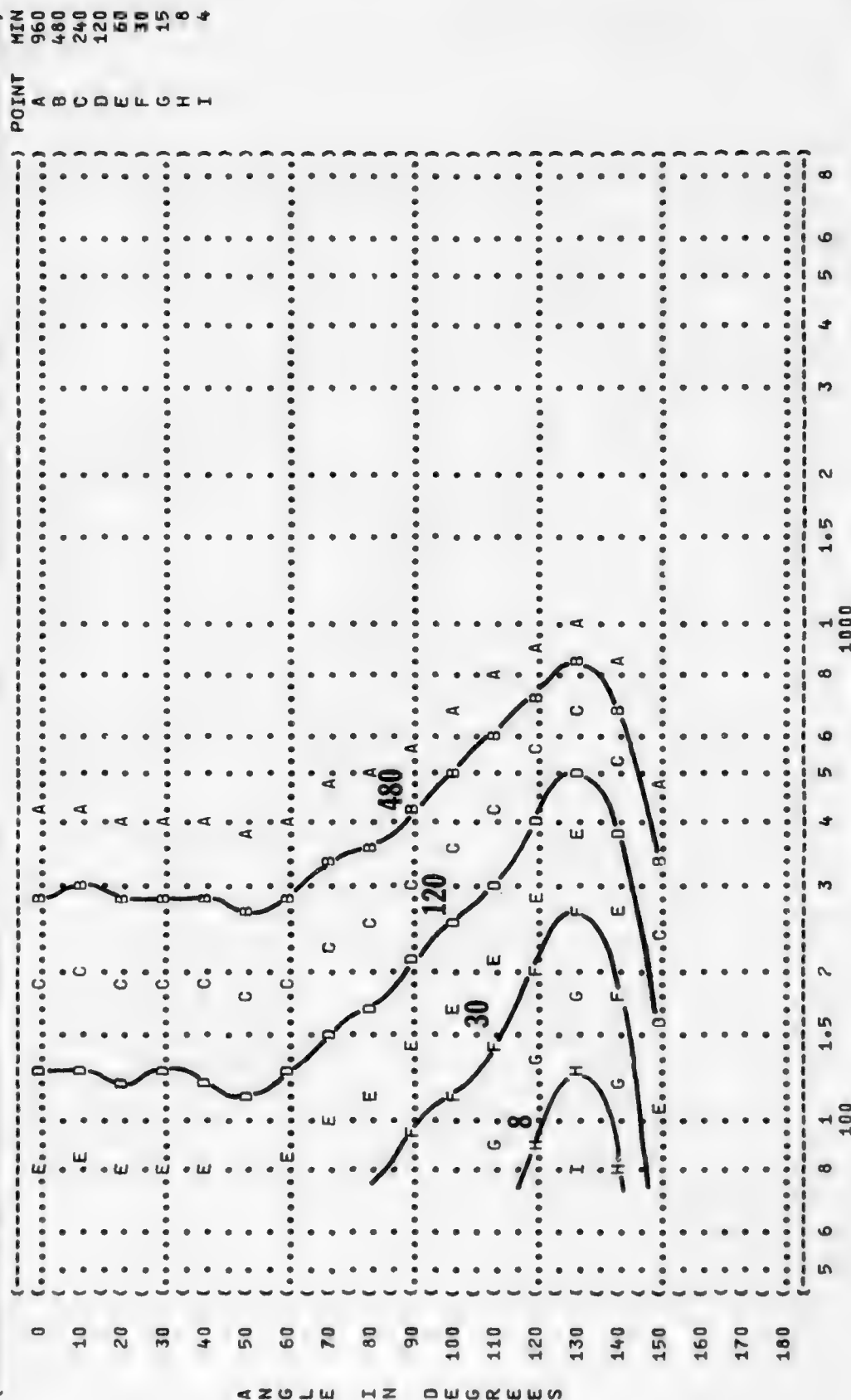




FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)	IDENTIFICATION:
EQUAL TIME CONTOURS (MINUTES)	
AMERICAN OPTICAL 1700 EAR MUFFS	OMEGA 1.4
	TEST 75-002-010
NOISE SOURCE/SUBJECT:	RUN 05
	METEOROLOGY:
	TEMP = 15 C
8-52G AIRCRAFT	BAR PRESS = .760 M HG
J57-43W ENGINE	REL HUMID = 70 %
FAR FIELD NOISE	PAGE 9

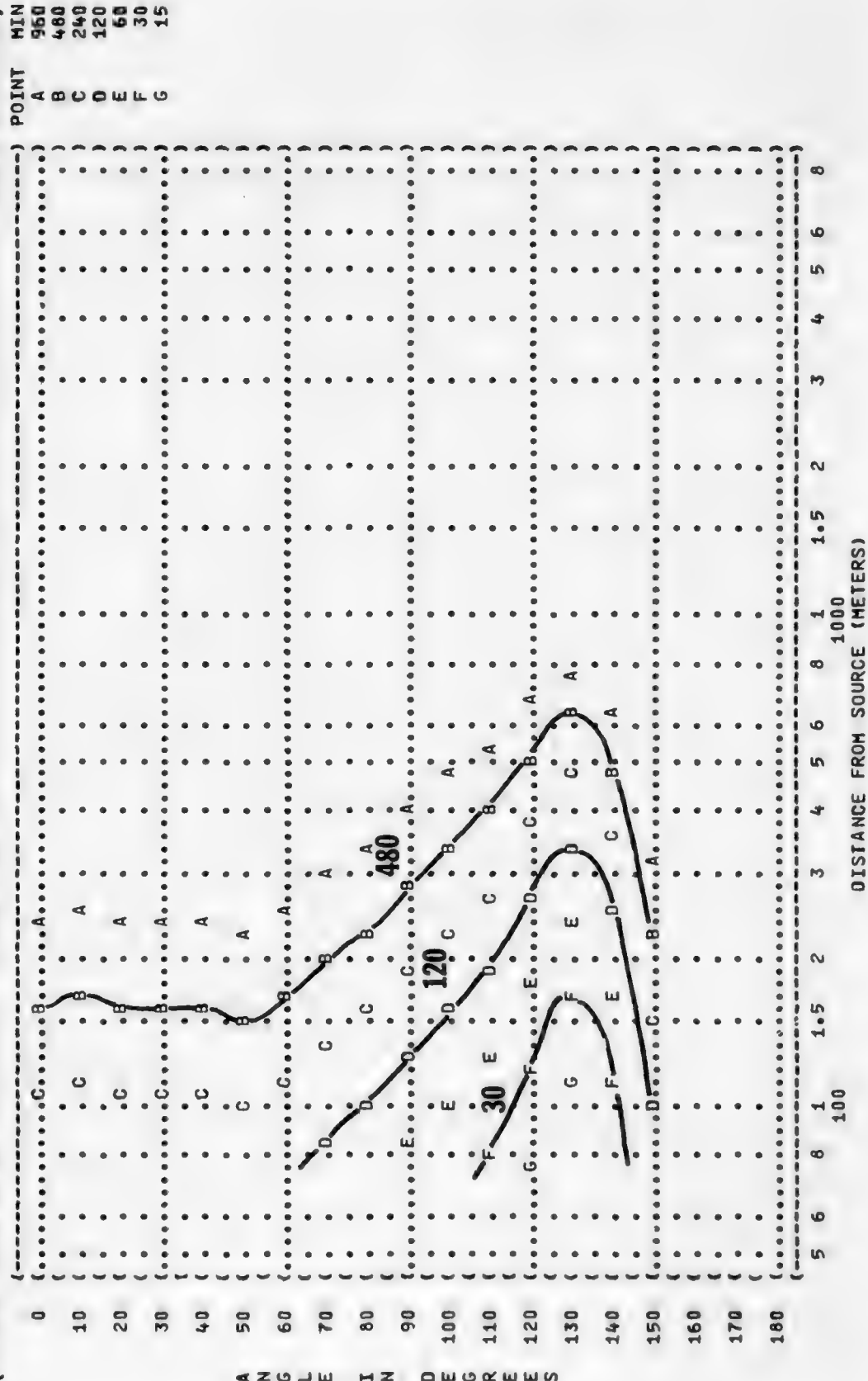


FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

IDENTIFICATION:

10

EQUAL TIME CONTOURS (MINUTES)

V-51R EAR PLUGS

NOISE SOURCE/SUBJECT:

OPERATION:

MILITARY POWER

94% RPM

ALL ENGINES

FREE FLOW

METEOROLOGY:

TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

15 APR 75

PAGE 10

OMEGA 1.4

TEST 75-002-010

RUN 05

POINT MIN

A 960

B 480

C 240

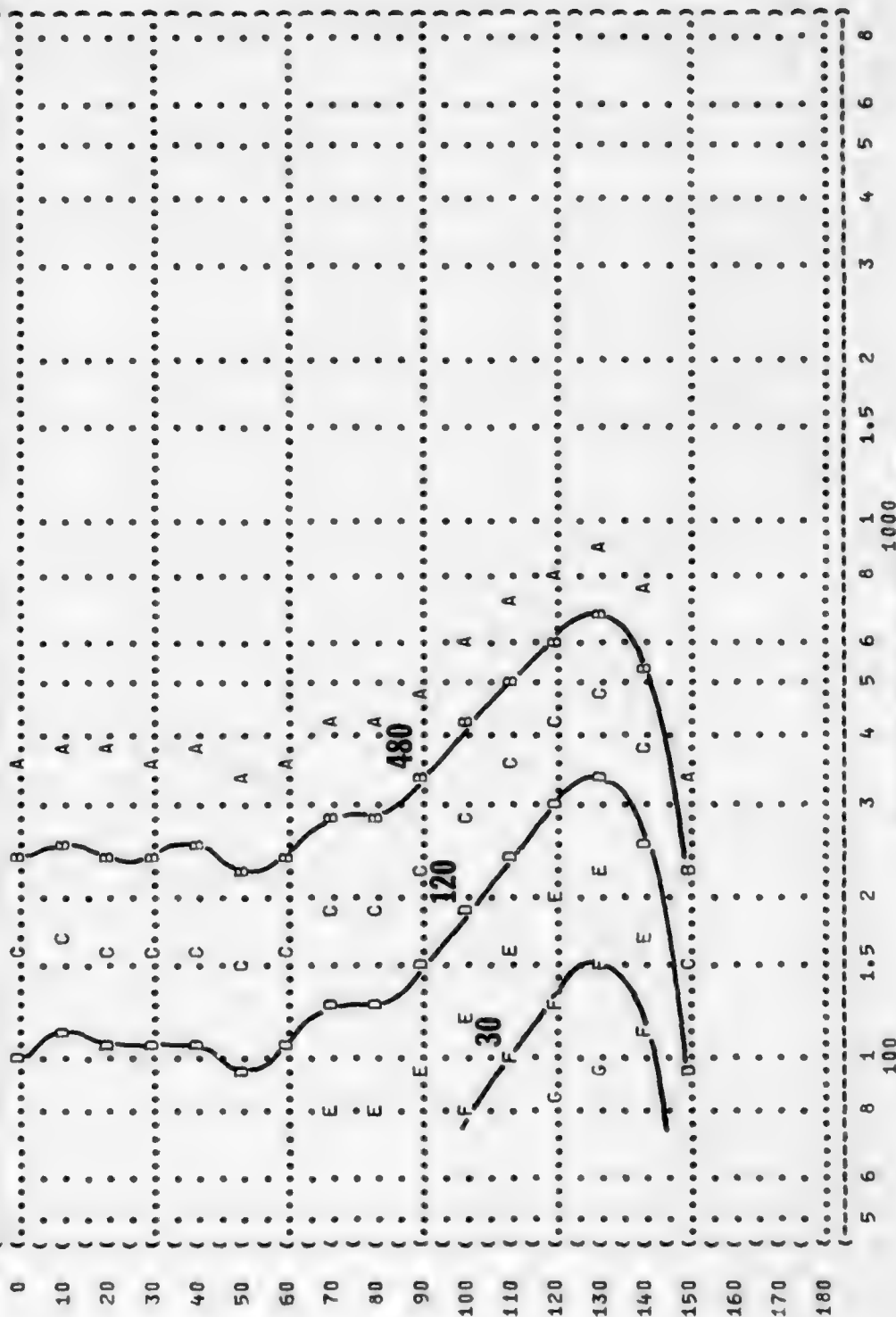
D 120

E 60

F 30

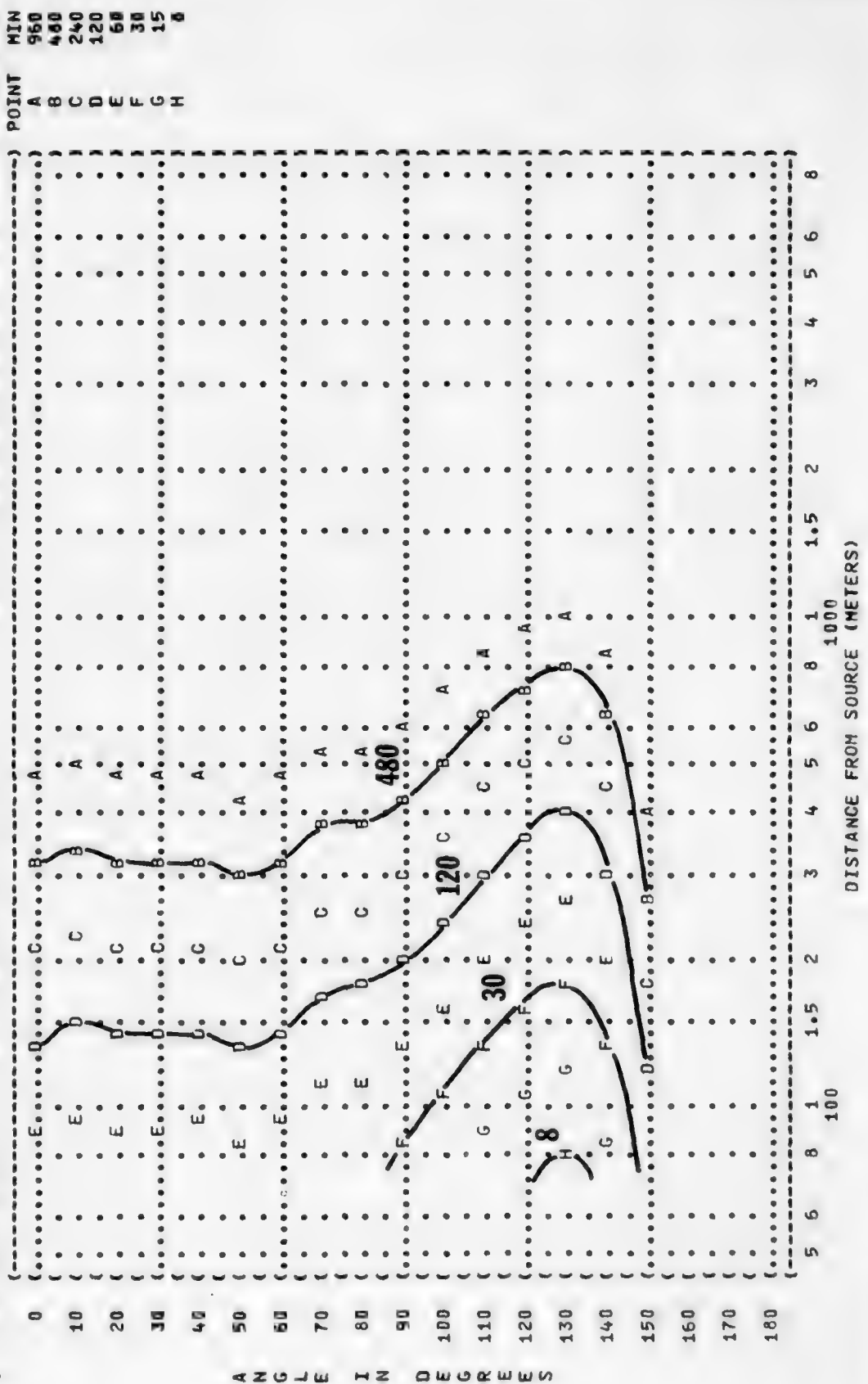
G 15

ANGLES IN DEGREES



DISTANCE FROM SOURCE (METERS)

( ( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION: )  
 ( ( 10 EQUAL TIME CONTOURS (MINUTES) ) )  
 ( ( COMFIT TRIPLE FLANGE EAR PLUGS ) )  
 ( ( NOISE SOURCE/SUBJECT: ) )  
 ( ( ( OPERATION: ) )  
 ( ( ( MILITARY POWER ) )  
 ( ( ( 94% RPM ) )  
 ( ( ( ALL ENGINES ) )  
 ( ( ( FREE FLOW ) )  
 ( ( B-52G AIRCRAFT ) )  
 ( ( J57-43W ENGINE ) )  
 ( ( FAR FIELD NOISE ) )  
 ( ( METEOROLOGY: ) )  
 ( ( TEMP = 15 C ) )  
 ( ( BAR PRESS = .760 M HG ) )  
 ( ( REL HUMID = 70 % ) )  
 ( ( RUN 05 ) )  
 ( ( 15 APR 75 ) )  
 ( ( PAGE 11 ) )  
 ( ( TEST 75-002-010 ) )  
 ( ( OMEGA 1.4 ) )  
 ( ( ) )



```
(-----)
( FIGURE: MAXIMUM PERMISSIBLE TIME {T} FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION:
(    10      EQUAL TIME CONTOURS (MINUTES) ) ,
( H-133 GROUND COMMUNICATION UNIT ) OMEGA 1.4
( NOISE SOURCE/SUBJECT: ) TEST 75-002-010
( ( OPERATION: ) METEOROLOGY: ) RUN 05
( ( MILITARY POWER ) TEMP = 15 C )
( ( 94% RPM ) BAR PRESS = .760 M HG ) 15 APR 75
( ( ALL ENGINES ) REL HUMID = 70 % )
( ( FREE FLOW ) ) PAGE 12
```

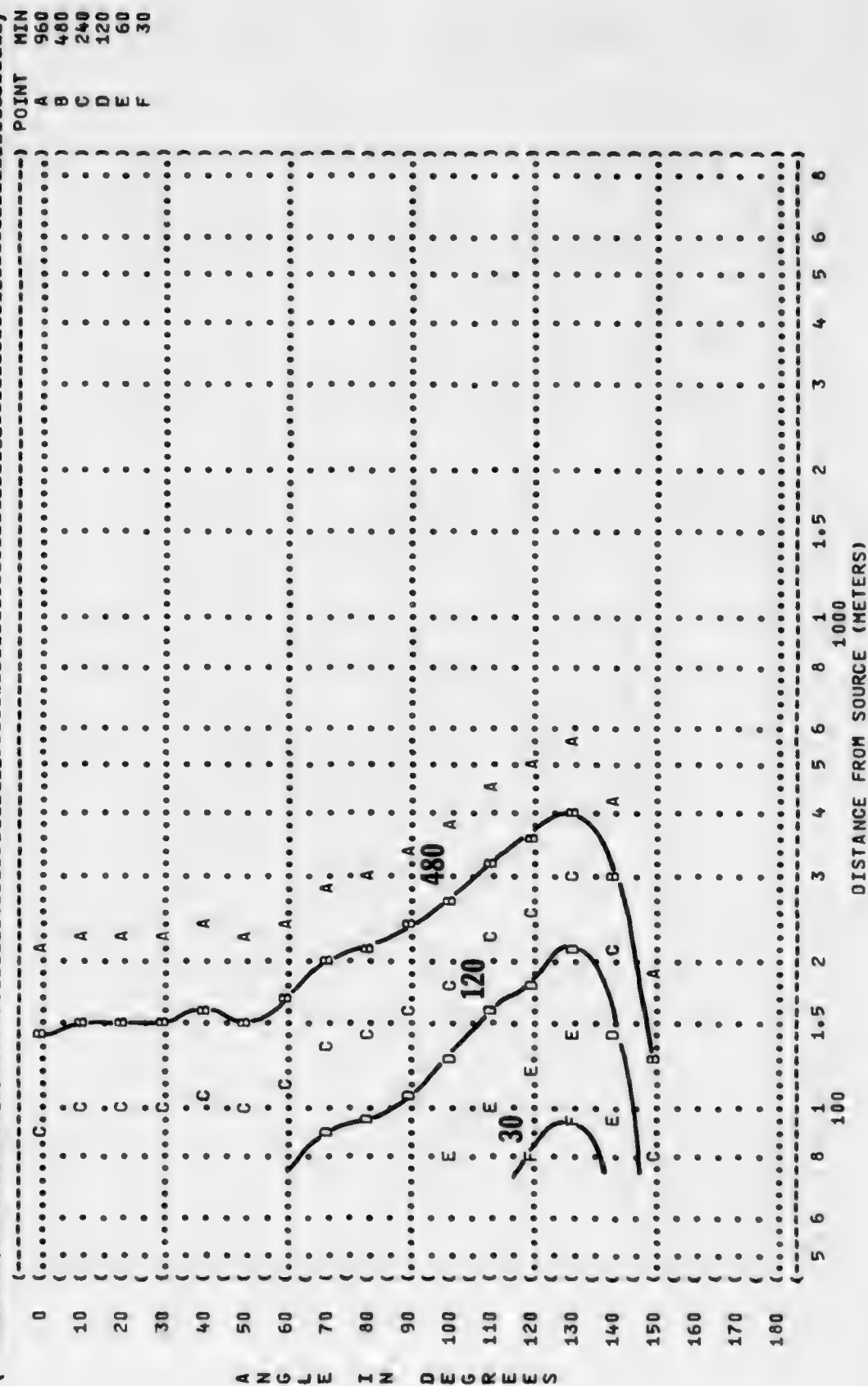


FIGURE: SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
31.5 HZ OCTAVE BAND

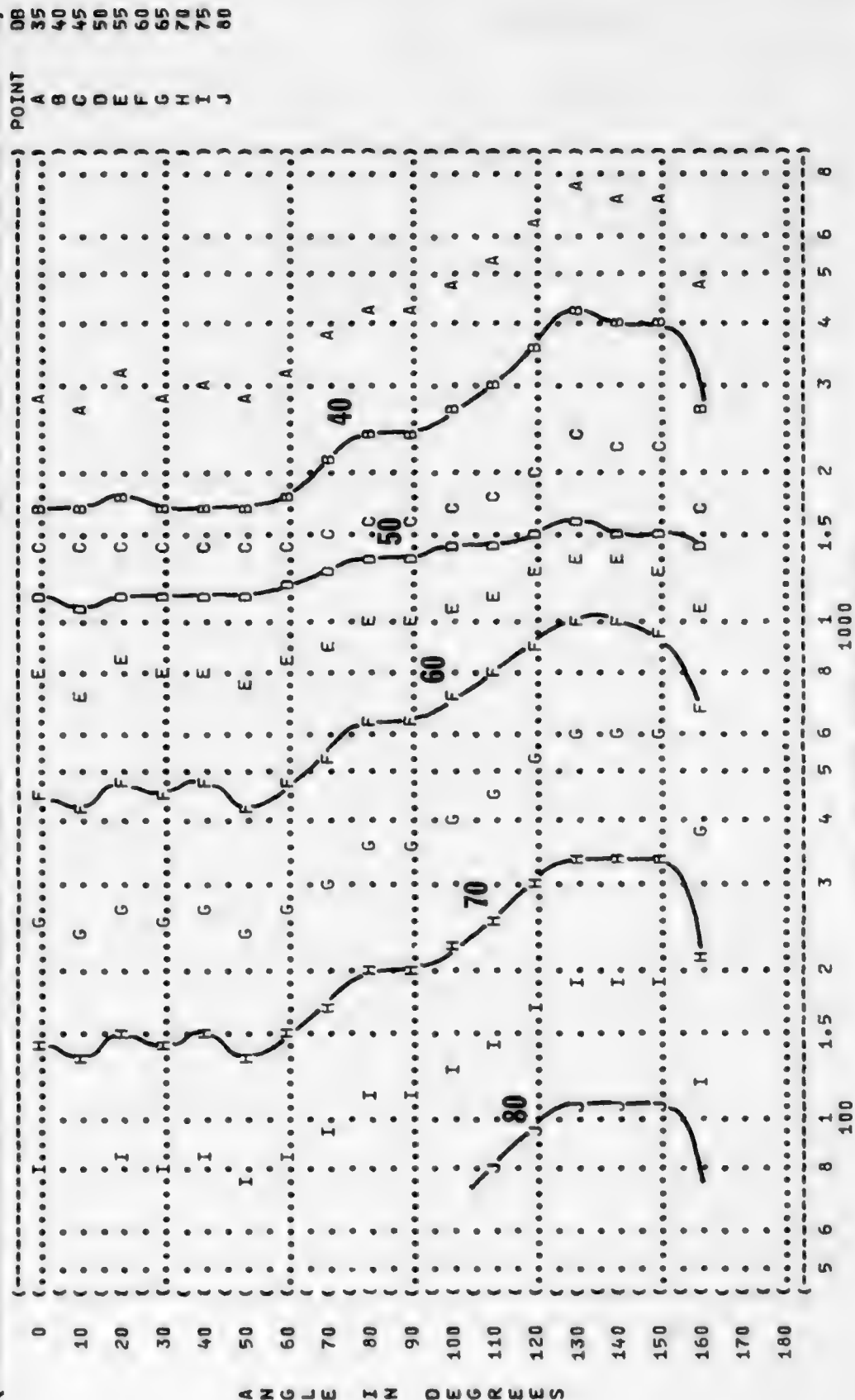
11

IDENTIFICATION:  
OMEGA 1.4  
TEST 75-002-010  
RUN 01  
15 APR 75  
PAGE 18

METEOROLOGY:  
TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

OPERATION:  
IDLE POWER  
61% RPM  
ALL ENGINES  
FREE FLOW

NOISE SOURCE/SUBJECT:  
B-52G AIRCRAFT  
J57-43M ENGINE  
FAR FIELD NOISE



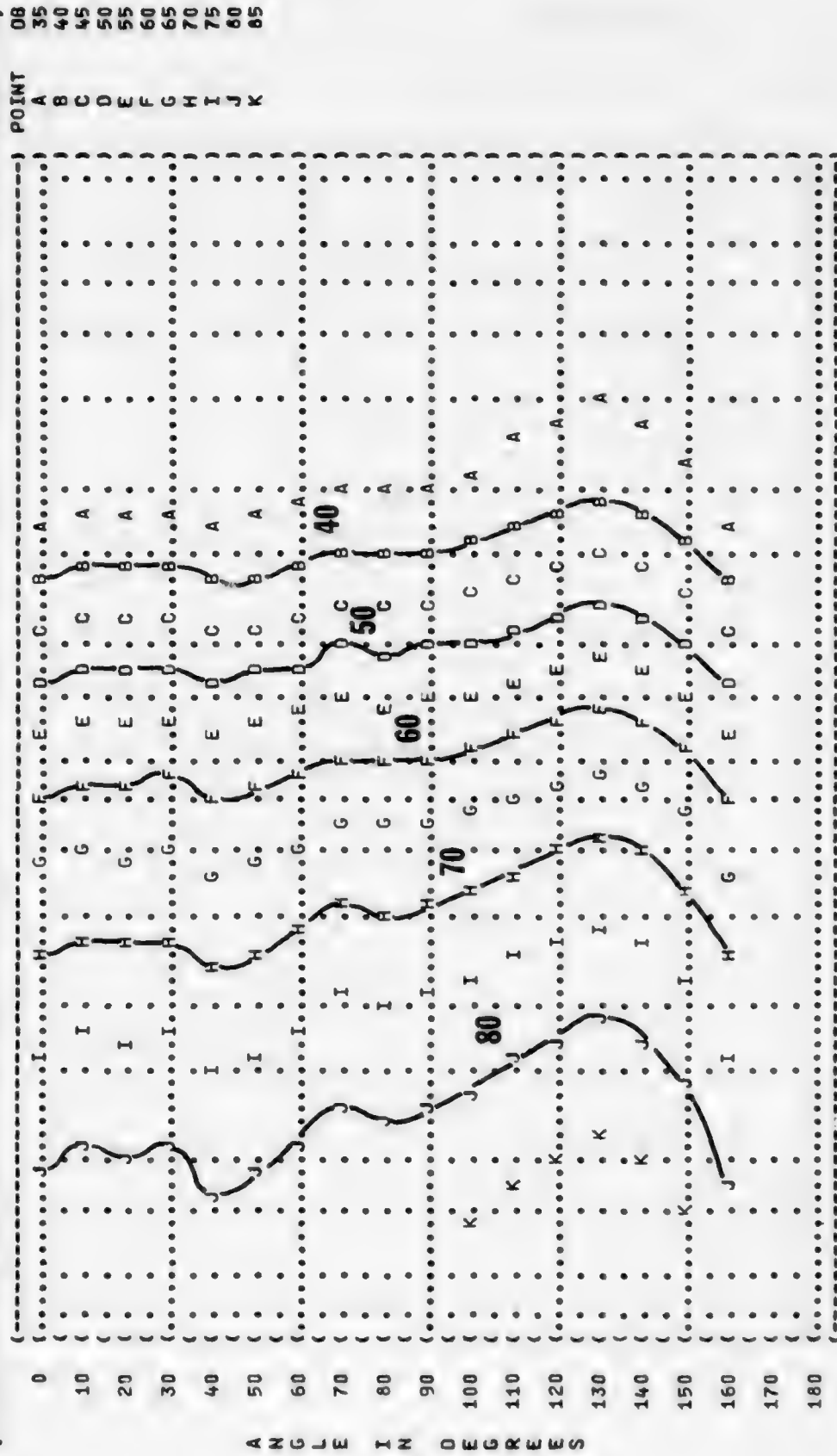
SOUND PRESSURE LEVEL {SPL}  
EQUAL LEVEL CONTOURS (DB)  
63 HZ OCTAVE BAND



DISTANCE FROM SOURCE (METERS)



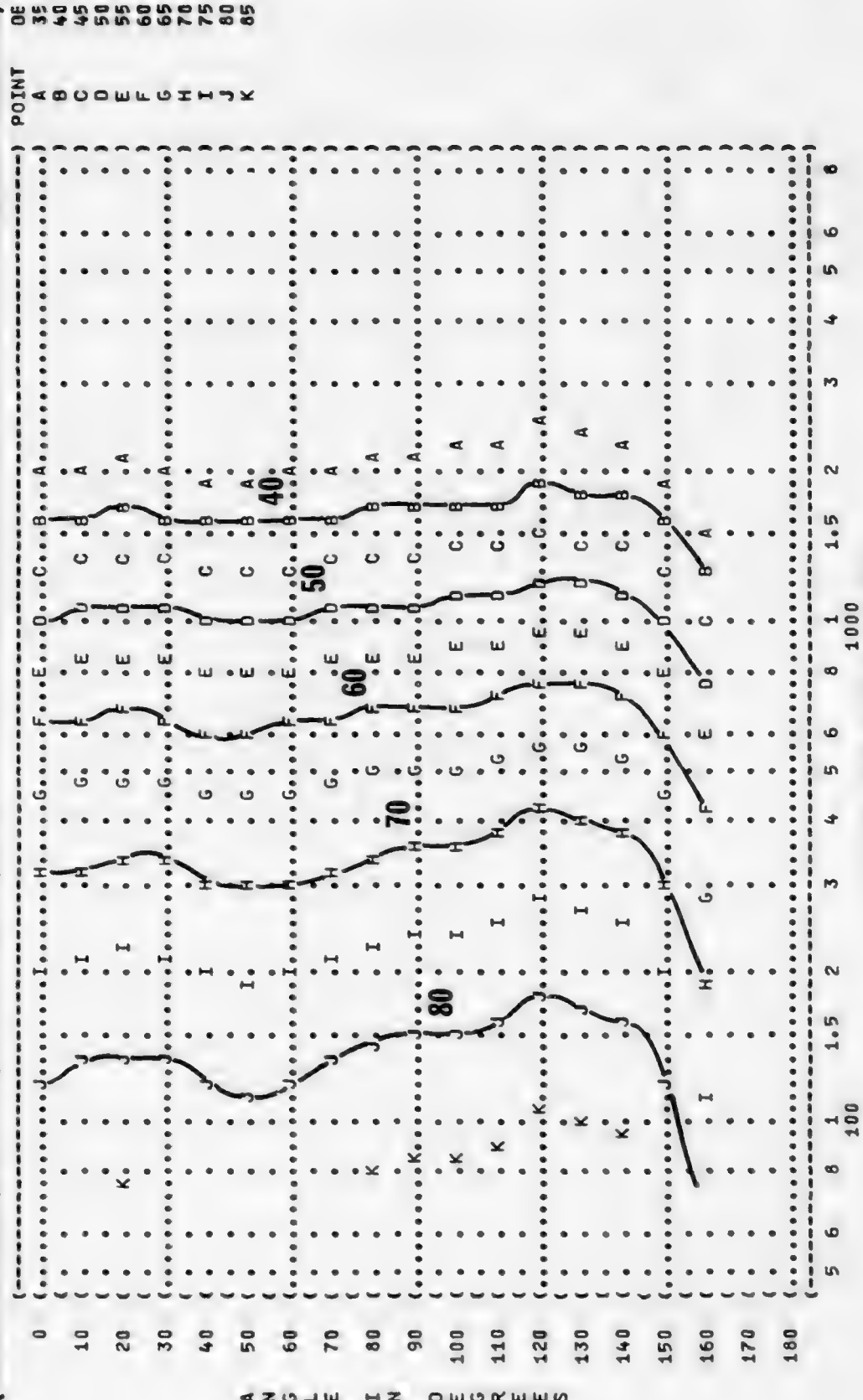
( FIGURE: SOUND PRESSURE LEVEL {SPL}  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 125 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( IDLE POWER  
 ( ( 61% RPM  
 ( B-52G AIRCRAFT  
 ( J57-43M ENGINE  
 ( FAR FIELD NOISE  
 ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( RUN 01  
 ( 15 APR 75  
 ( PAGE 20  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 (



0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180  
 5 6 8 1 1.5 2 3 4 5 6 8 100 1000  
 DISTANCE FROM SOURCE (METERS)

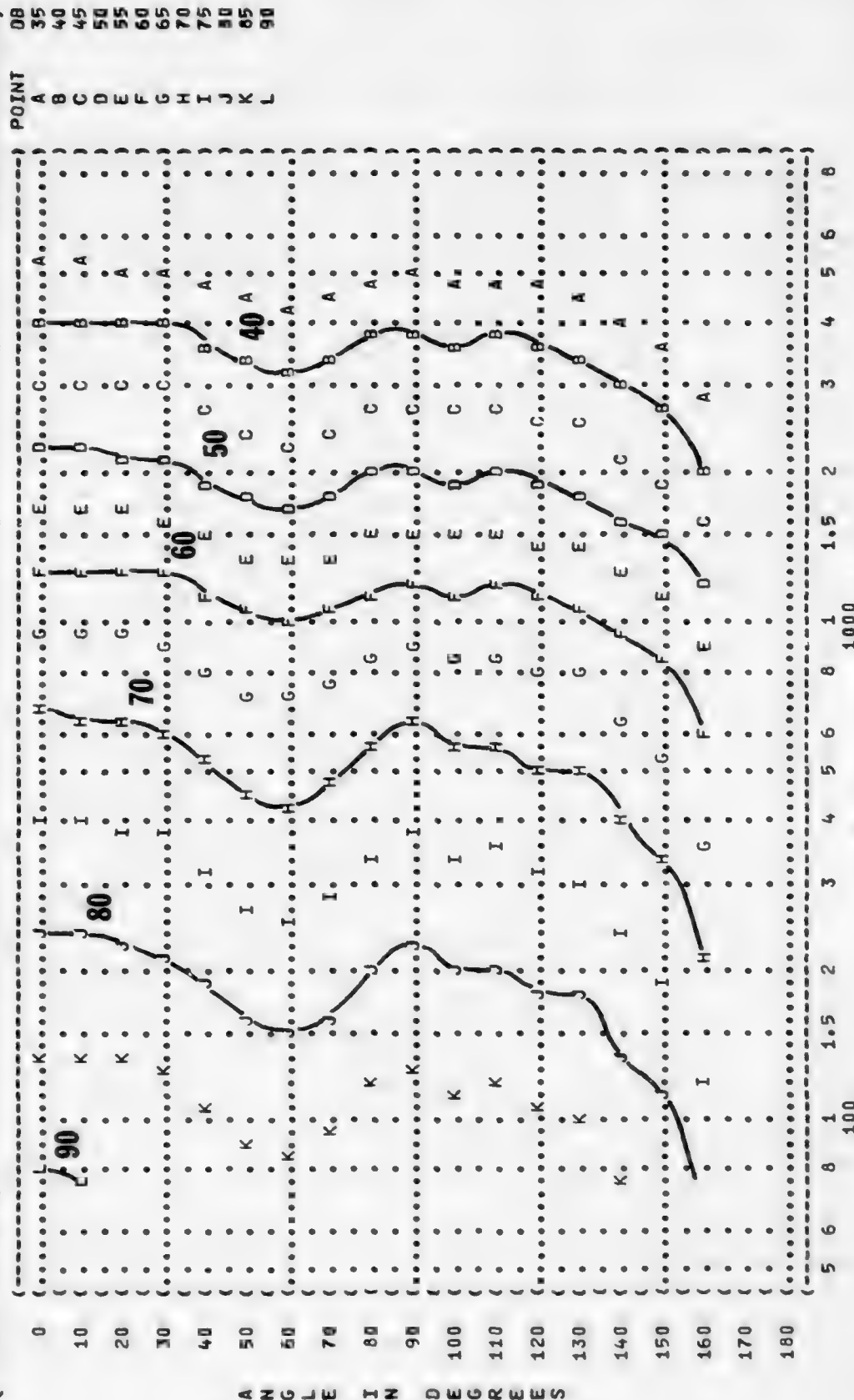
A N G L E I N D E G R E E S

( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( 11 EQUAL LEVEL CONTOURS (DB) )  
 ( 250 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( B-52G AIRCRAFT )  
 ( J57-43W ENGINE )  
 ( FAR FIELD NOISE )  
 ( OPERATION: )  
 ( IDLE POWER )  
 ( 61% RPM )  
 ( ALL ENGINES )  
 ( FREE FLOW )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-010 )  
 ( RUN 01 )  
 ( 15 APR 75 )  
 ( PAGE 21 )



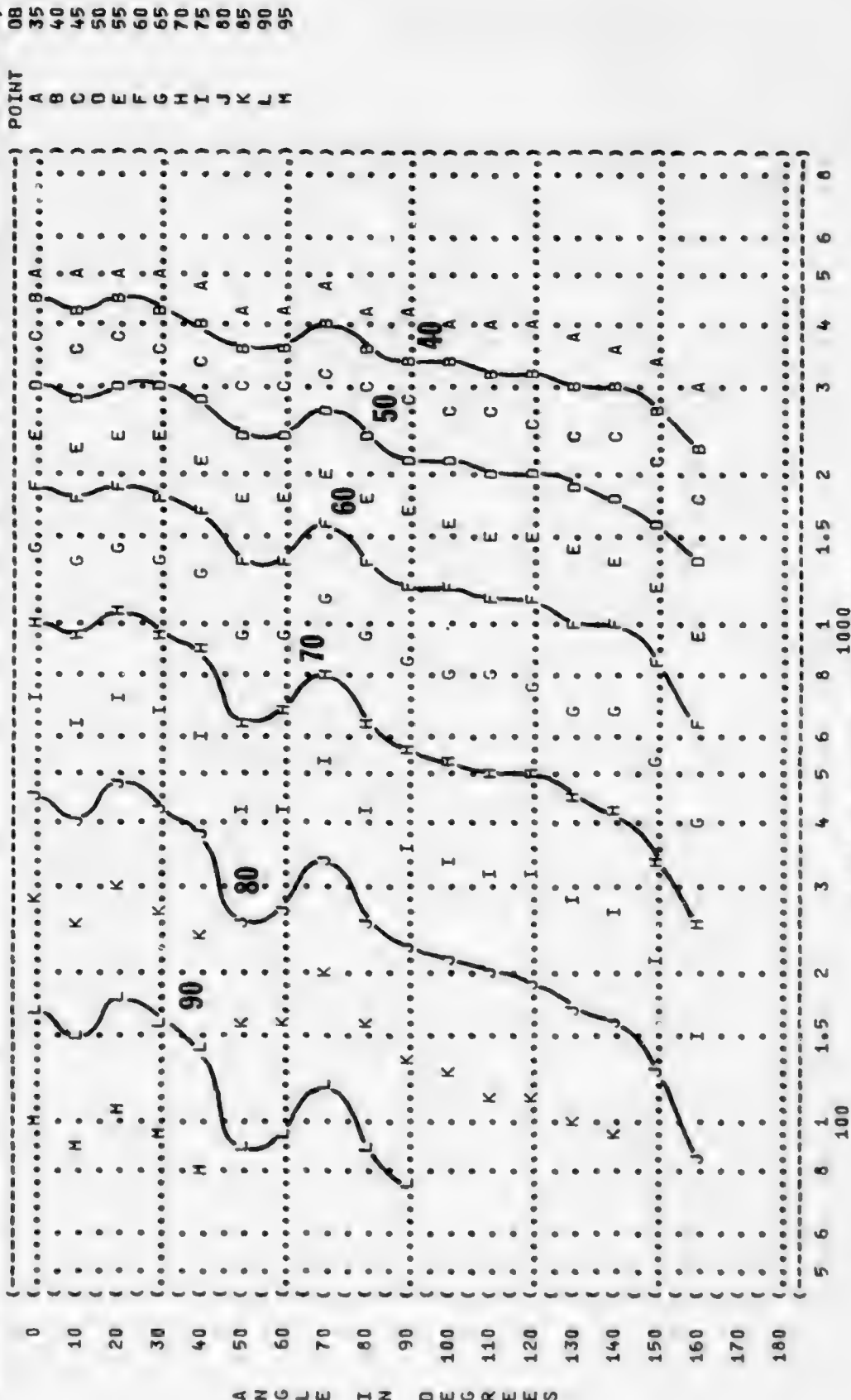
DISTANCE FROM SOURCE (METERS)

( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 500 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( IDLE POWER  
 ( ( 61% RPM  
 ( ( ALL ENGINES  
 ( ( FREE FLOW  
 ( B-52G AIRCRAFT  
 ( J57-43W ENGINE  
 ( FAR FIELD NOISE  
 ( METEOROLOGY: ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 ( RUN 01  
 ( 15 APR 75  
 ( PAGE 22



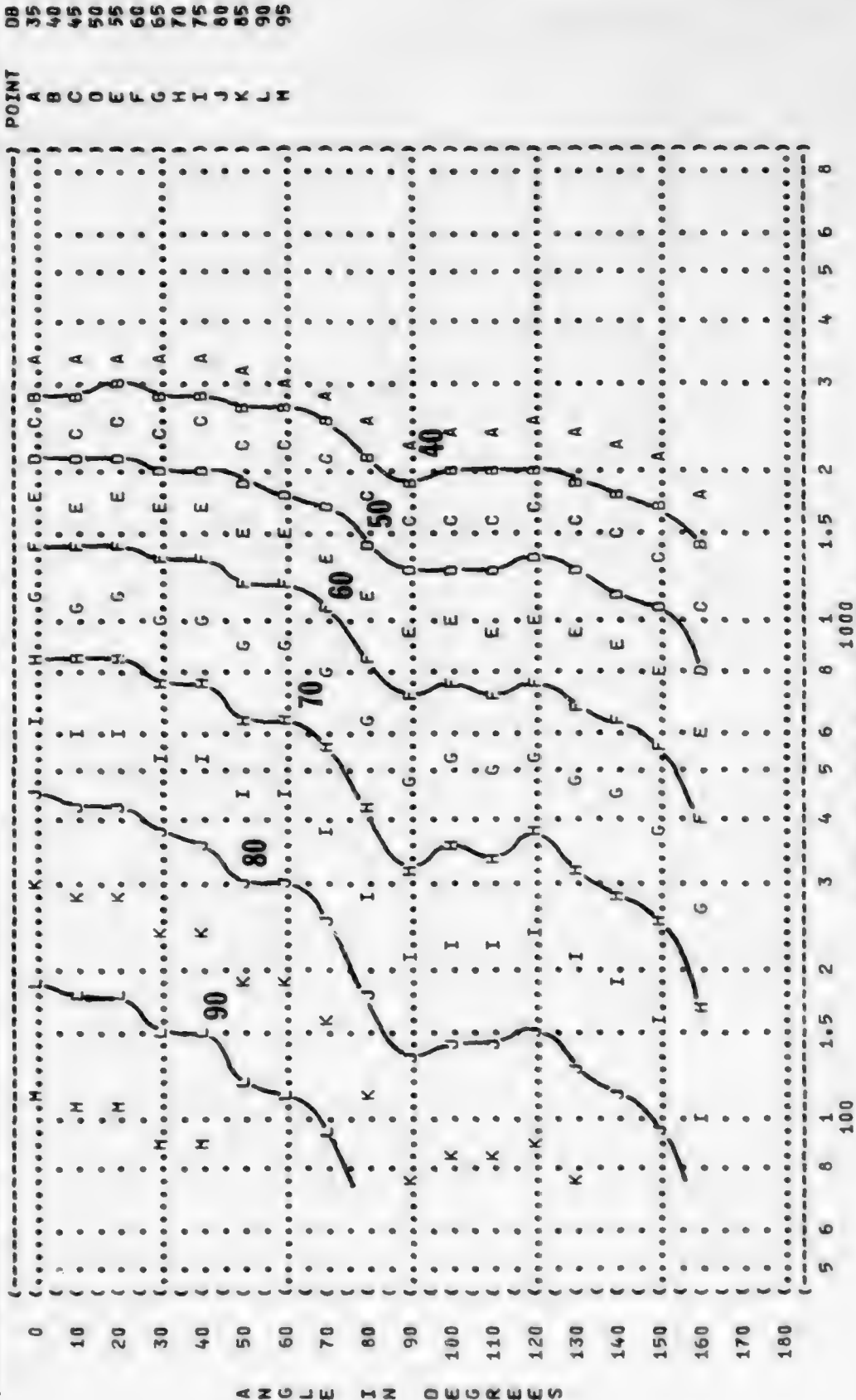
A N G L E I N D E G R E E S

( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( 11 EQUAL LEVEL CONTOURS (DB) )  
 ( 1000 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( ( OPERATION: )  
 ( ( IDLE POWER )  
 ( ( 61% RPM )  
 ( ( ALL ENGINES )  
 ( ( FREE FLOW )  
 ( B-52G AIRCRAFT )  
 ( J57-43M ENGINE )  
 ( FAR FIELD NOISE )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-010 )  
 ( RUN 01 )  
 ( 15 APR 75 )  
 ( PAGE 23 )



DISTANCE FROM SOURCE (METERS)

( ( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( ( 2000 HZ OCTAVE BAND  
 ( ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( B-52G AIRCRAFT ( IDLE POWER  
 ( ( J57-43M ENGINE ( 61% RPM  
 ( ( FAR FIELD NOISE ( ALL ENGINES  
 ( ( ( FREE FLOW  
 ( ( METEOROLOGY: ( TEMP = 15 C  
 ( ( BAR PRESS = .760 M HG  
 ( ( REL HUMID = 70 %  
 ( ( IDENTIFICATION: ( OMEGA 1.4  
 ( ( TEST 75-002-010  
 ( ( RUN 01  
 ( ( 15 APR 75  
 ( ( PAGE 24



AD-A033 643

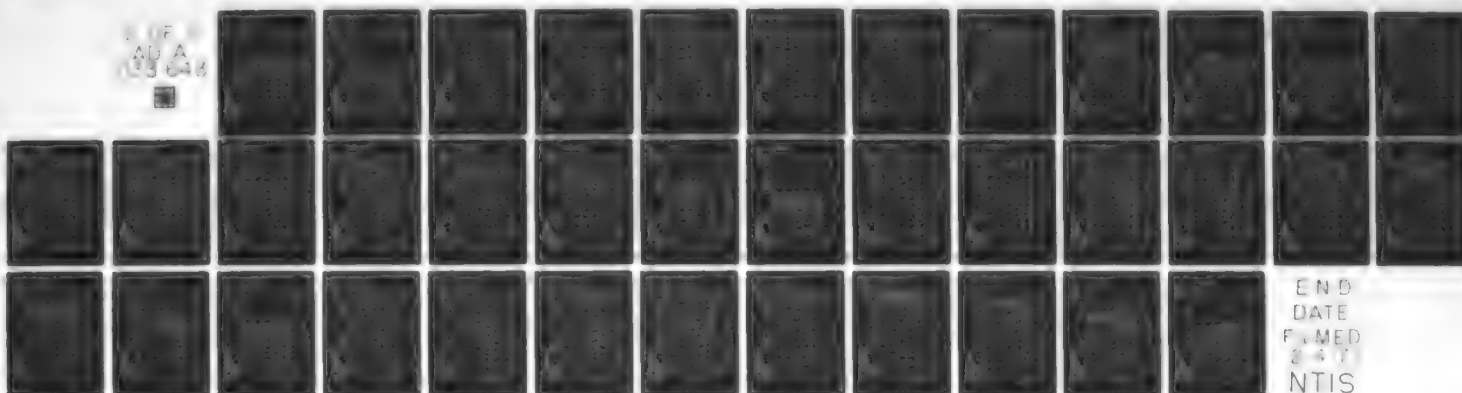
AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OHIO F/G 1/3  
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 64. B-52G AIR--ETC(U)  
NOV 75 R G POWELL

UNCLASSIFIED

AMRL-TR-75-50-VOL-64

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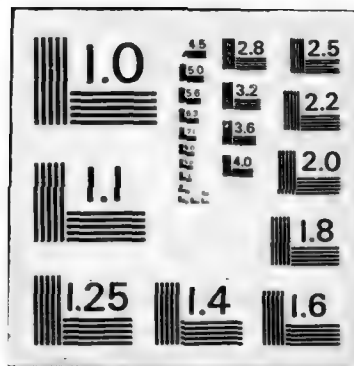
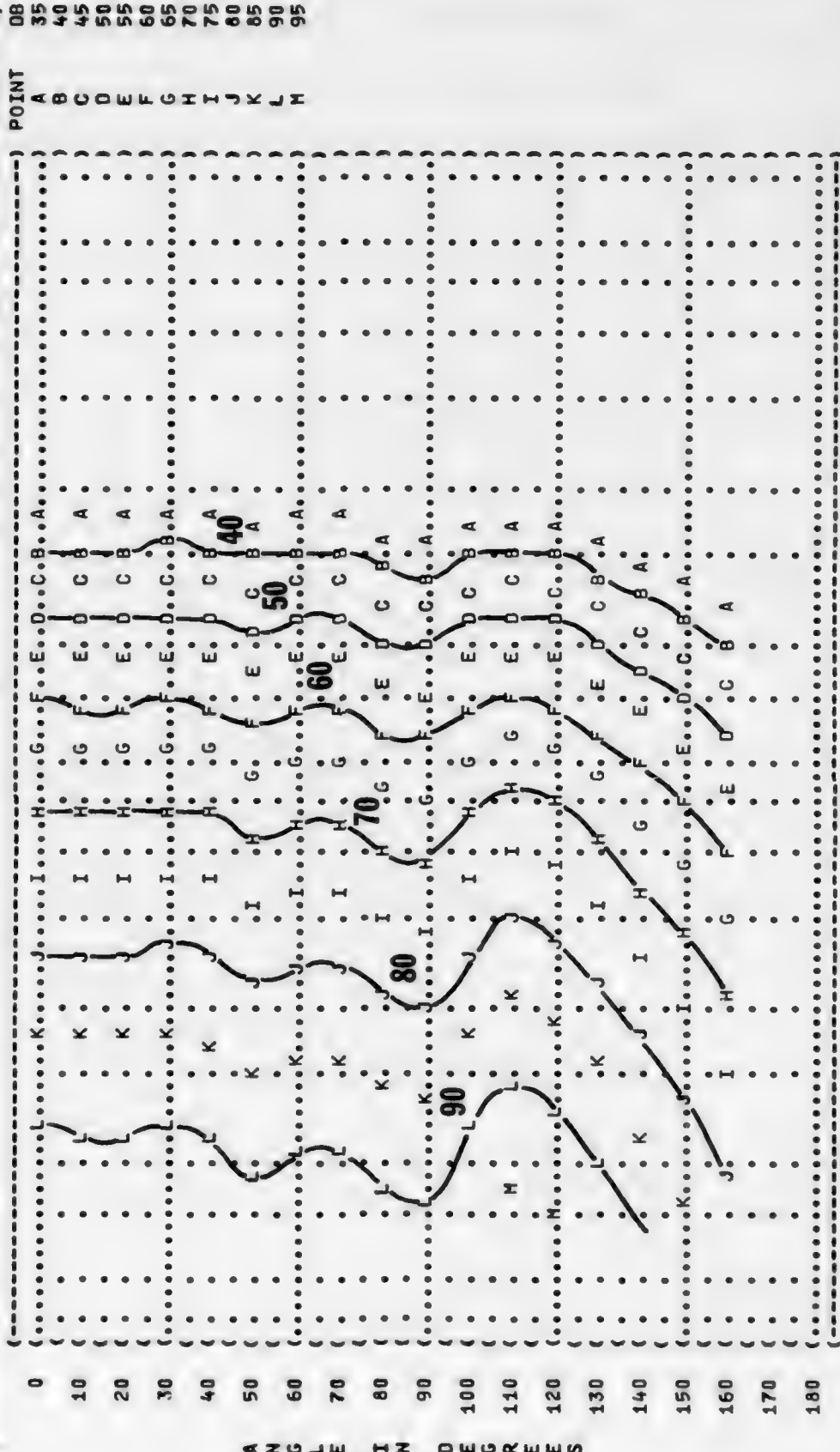


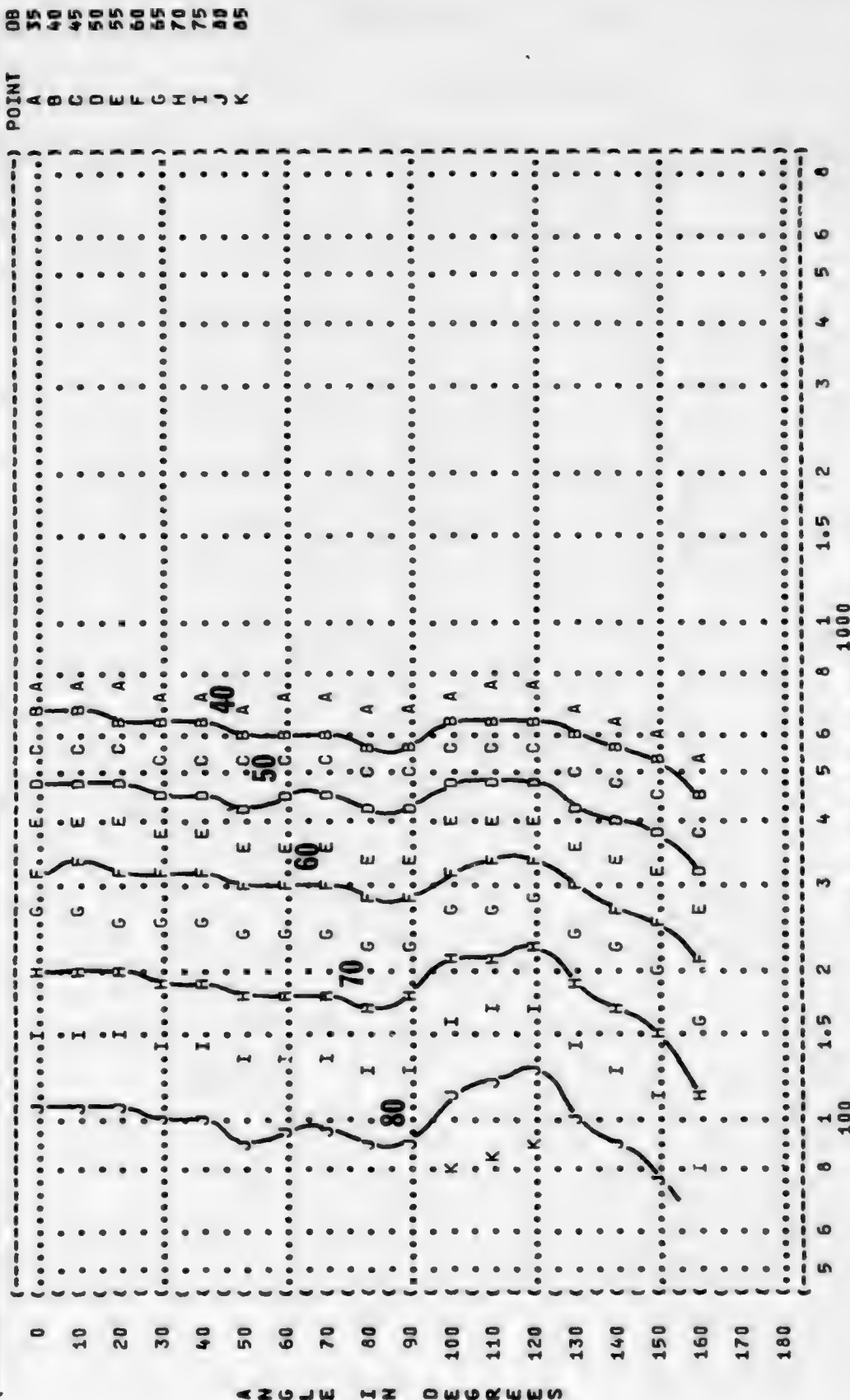
FIGURE: SOUND PRESSURE LEVEL (SPL)  
 11 EQUAL LEVEL CONTOURS (DB)  
 4000 HZ OCTAVE BAND  
 NOISE SOURCE/SUBJECT:  
 OPERATION:  
 ( ) IDLE POWER  
 ( ) 61% RPM  
 ( ) ALL ENGINES  
 ( ) FREE FLOW  
 B-52G AIRCRAFT  
 J57-43M ENGINE  
 FAR FIELD NOISE  
 METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 75-002-010  
 ( ) RUN 01  
 ( ) 15 APR 75  
 ( ) PAGE 25



DB POINT  
 35 A  
 40 B  
 45 C  
 50 D  
 55 E  
 60 F  
 65 G  
 70 H  
 75 I  
 80 J  
 85 K  
 90 L  
 95 M

DISTANCE FROM SOURCE (METERS)

( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( 11 EQUAL LEVEL CONTOURS (DB) )  
 ( 8000 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( ( OPERATION: )  
 ( ( IDLE POWER )  
 ( ( 61% RPM )  
 ( ( ALL ENGINES )  
 ( ( FREE FLOW )  
 ( B-52G AIRCRAFT )  
 ( J57-43M ENGINE )  
 ( FAR FIELD NOISE )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATIONS: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-010 )  
 ( RUN 01 )  
 ( 15 APR 75 )  
 ( PAGE 26 )



IDENTIFICATION: OMEGA 1.4  
 TEST 75-002-010  
 RUN 02  
 15 APR 75  
 PAGE 18

METEOROLOGY: TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

OPERATION: 90% RPM ENGINE NO. 4  
 IDLE POWER  
 61% RPM ALL OTHER ENGINES  
 FREE FLOW

NOISE SOURCE/SUBJECT: B-52G AIRCRAFT  
 J57-43M ENGINE  
 FAR FIELD NOISE

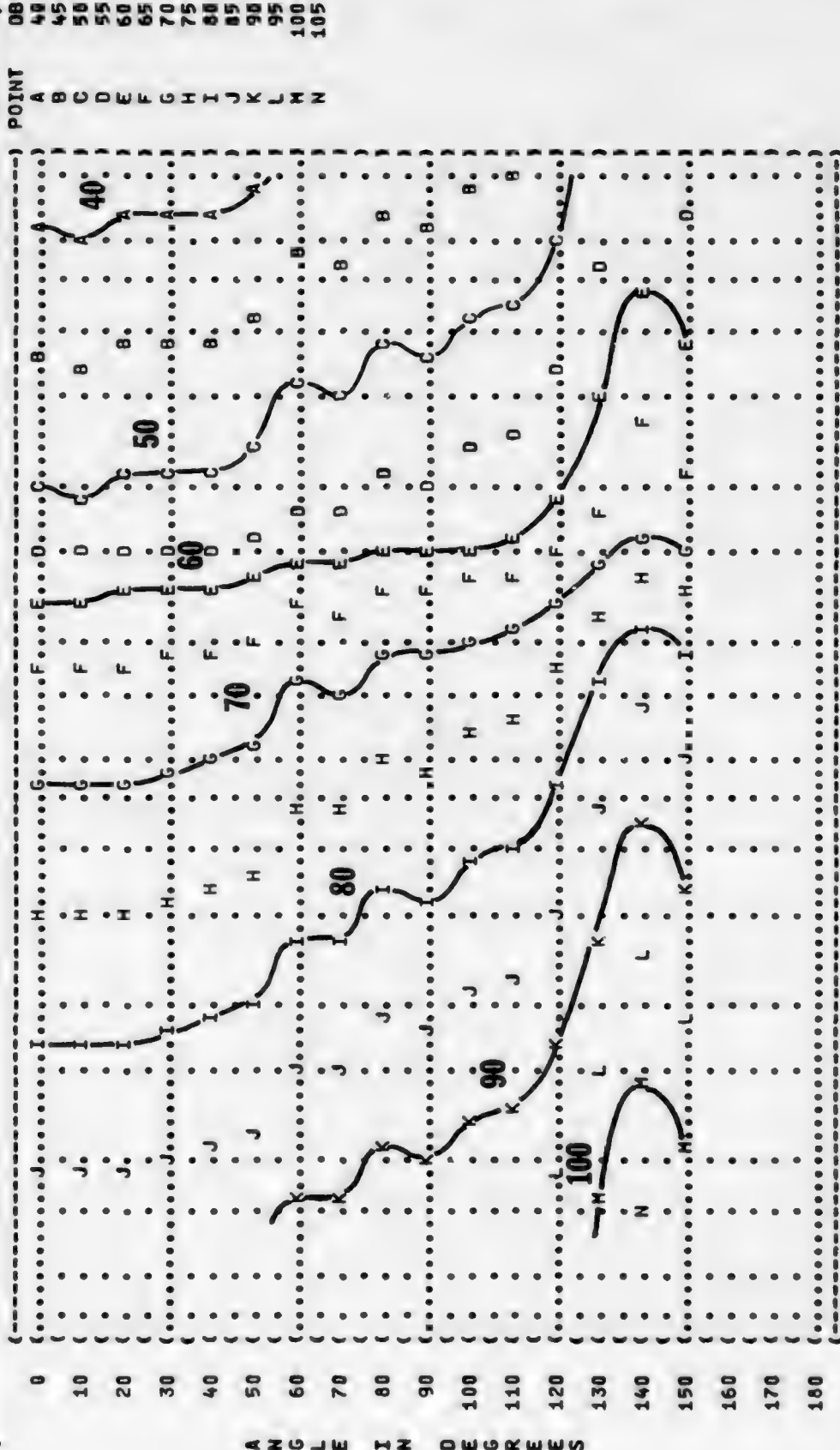


FIGURE 11  
SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
63 HZ OCTAVE BAND

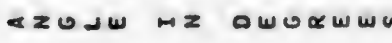
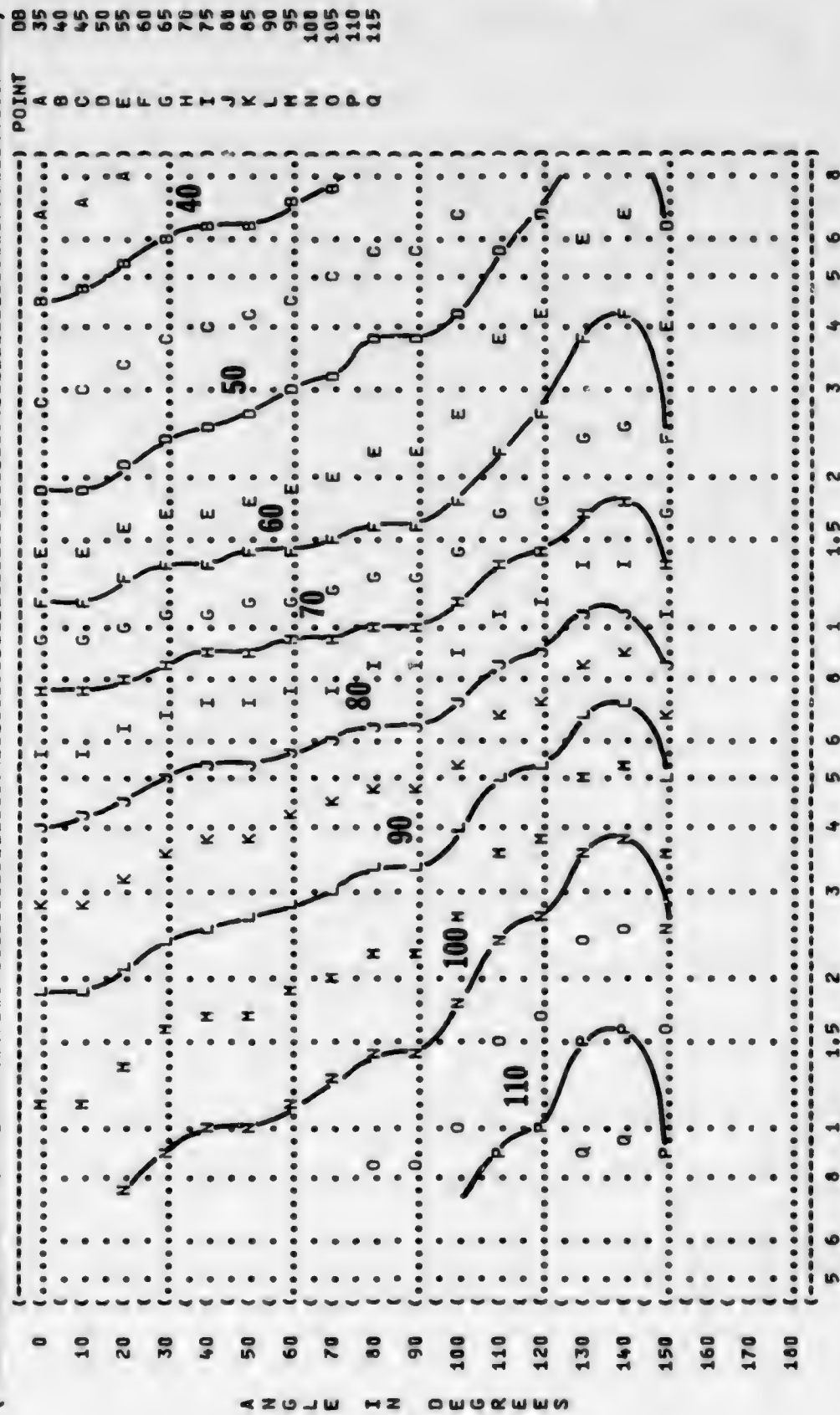


FIGURE: SOUND PRESSURE LEVEL {SPL}  
 11 EQUAL LEVEL CONTOURS (DB)  
 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: OPERATION: METEOROLOGY:  
 ( 90% RPM ENGINE NO. 4 ) TEMP = 15 C  
 ( IDLE POWER ) BAR PRESS = .760 M HG  
 ( 61% RPM ALL OTHER ENGINES ) REL HUMID = 70 %  
 ( FREE FLOW )

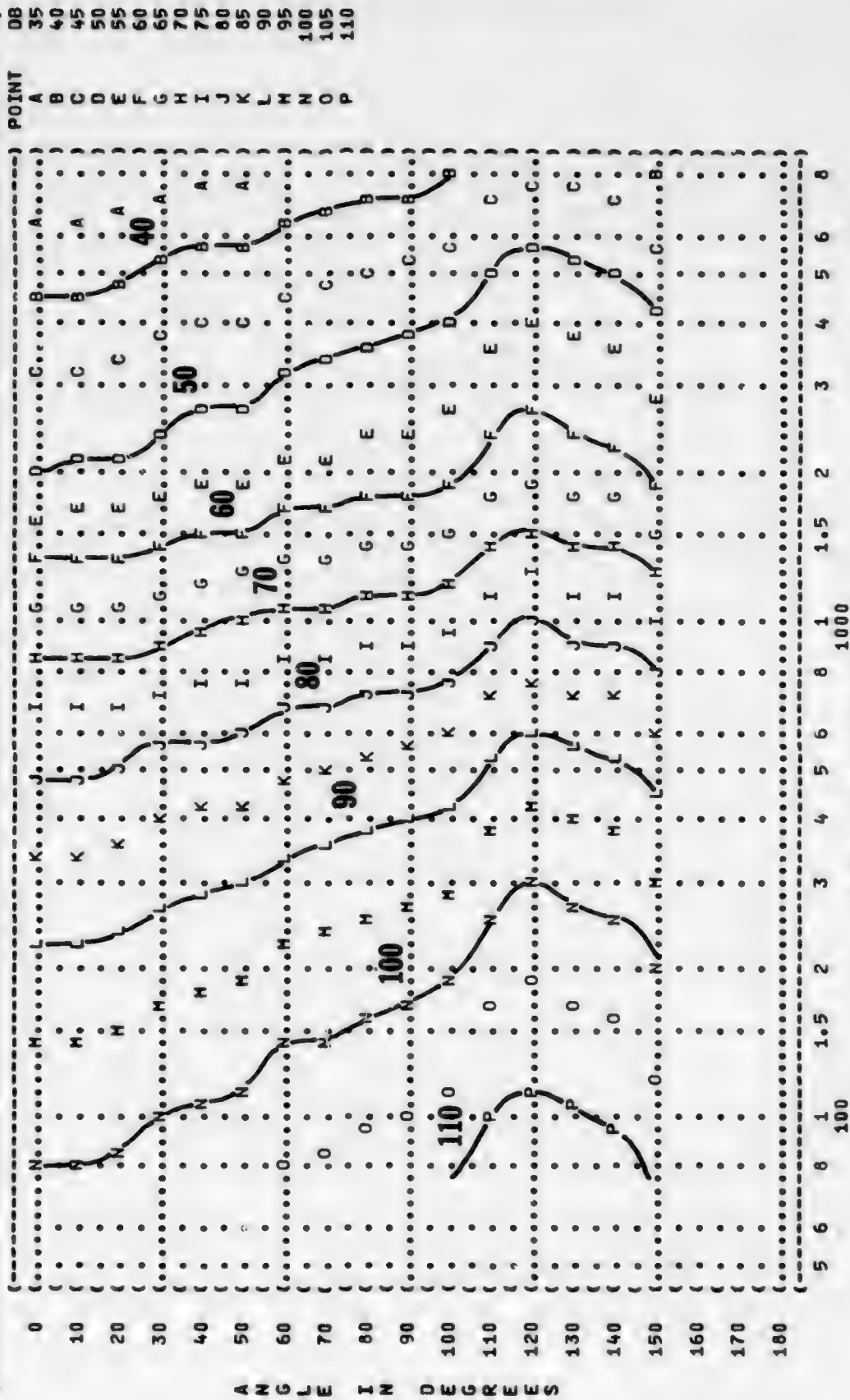
B-52G AIRCRAFT  
 J57-43M ENGINE  
 FAR FIELD NOISE

IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-010  
 RUN 02  
 15 APR 75  
 PAGE 20



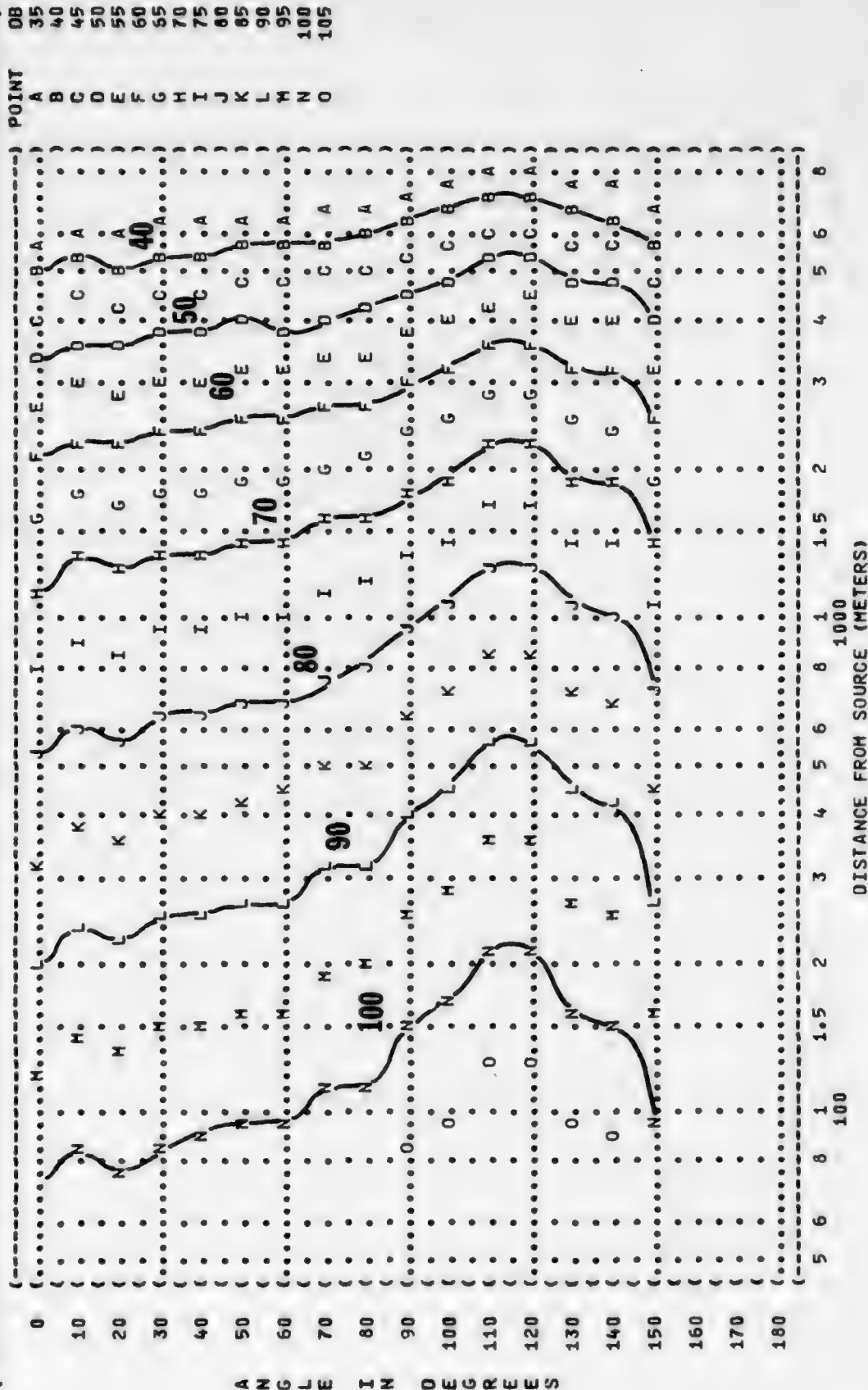


( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 250 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( ( OPERATIONS:  
 ( ( 90% RPM ENGINE NO. 4  
 ( ( IDLE POWER  
 ( ( 61% RPM ALL OTHER ENGINES  
 ( ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 ( RUN 02  
 ( 15 APR 75  
 ( PAGE 21

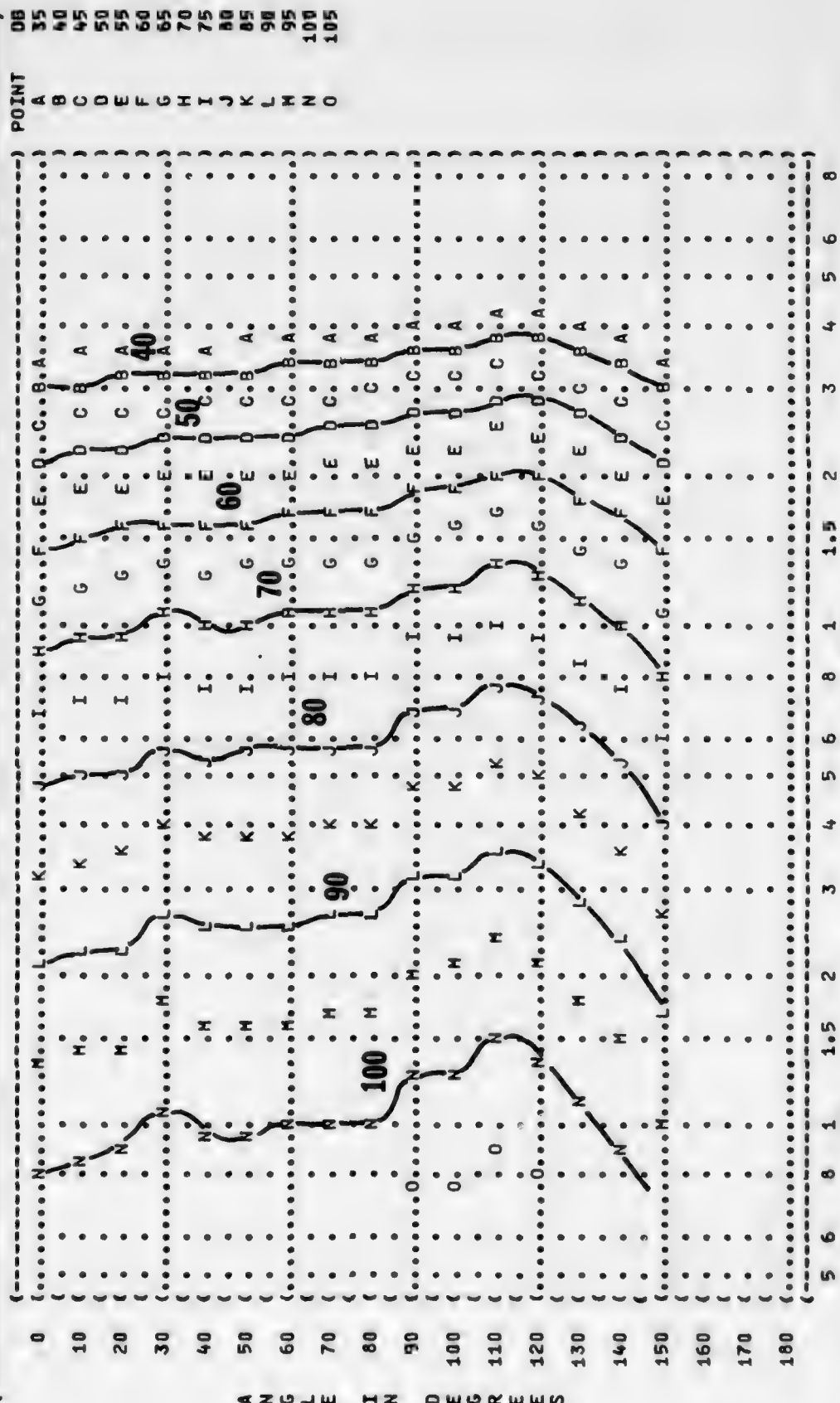




( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 11 1000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( ( OPERATION:  
 ( ( 90% RPM ENGINE NO. 4  
 ( ( IDLE POWER  
 ( ( 61% RPM ALL OTHER ENGINES  
 ( ( FREE FLOW  
 ( NOISE SOURCE/SUBJECT:  
 ( ( B-52G AIRCRAFT  
 ( ( J57-43M ENGINE  
 ( ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 ( RUN 02  
 ( 15 APR 75  
 ( PAGE 23

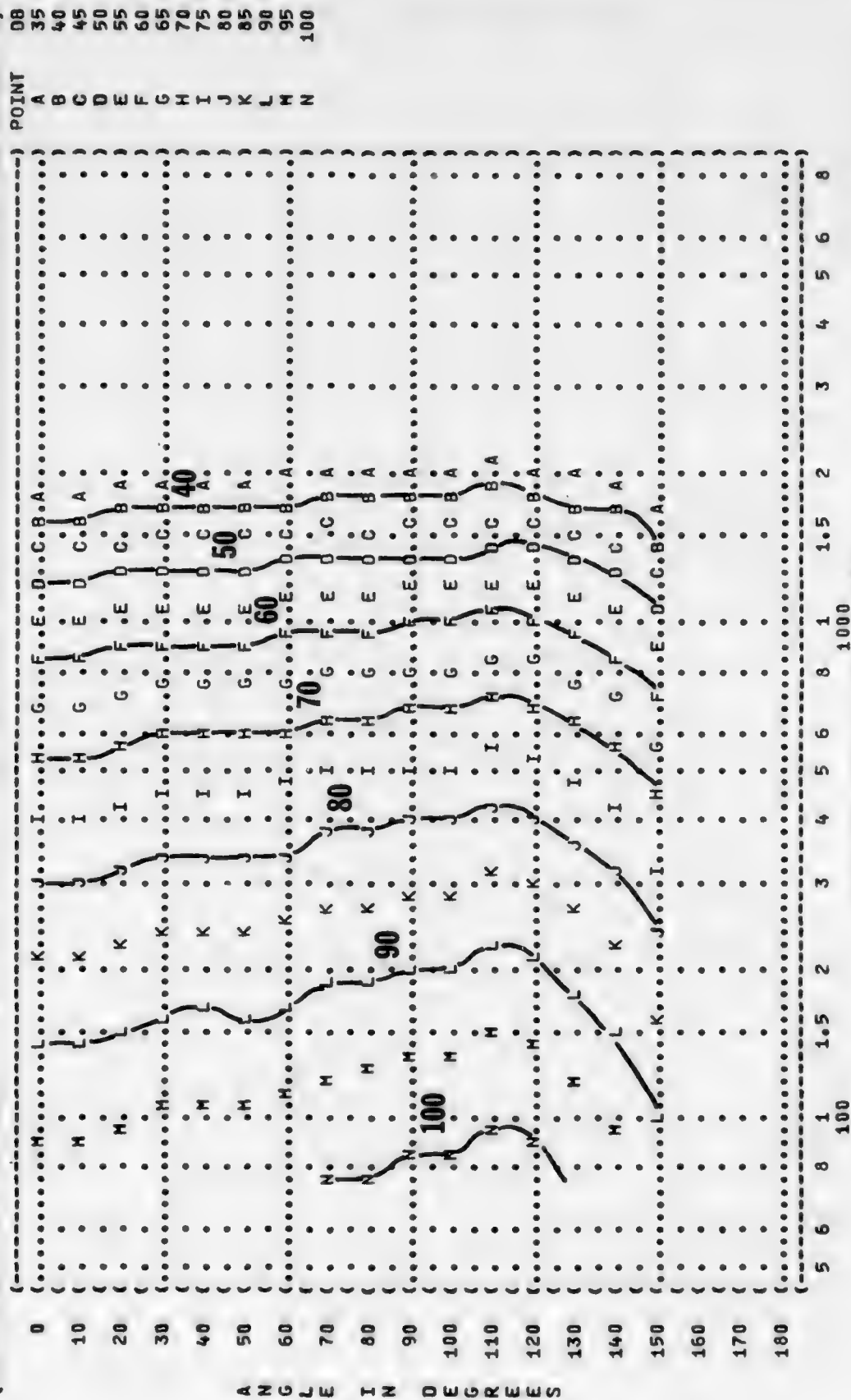


( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 2000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( 90% RPM ENGINE NO. 4 ) METEOROLOGY:  
 ( ( IDLE POWER ) TEMP = 15 C  
 ( ( 61% RPM ALL OTHER ENGINES ) BAR PRESS = .760 M HG  
 ( ( FREE FLOW ) REL HUMID = 70 %  
 ( ( 15 APR 75 )  
 ( ( PAGE 24 )  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 ( RUN 02



DISTANCE FROM SOURCE (METERS)

( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( 11 EQUAL LEVEL CONTOURS (DB) )  
 ( 4000 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( ( OPERATION: ) METEOROLOGY: )  
 ( ( 90% RPM ENGINE NO. 4 ) TEMP = 15 C )  
 ( ( IDLE POWER ) BAR PRESS = .760 M HG )  
 ( ( 61% RPM ALL OTHER ENGINES ) REL HUMID = 70 % )  
 ( ( FREE FLOW ) )  
 ( B-52G AIRCRAFT )  
 ( J57-43W ENGINE )  
 ( FAR FIELD NOISE )  
 ( ) IDENTIFICATION: )  
 ( ) OMEGA 1.4 )  
 ( TEST 75-002-010 )  
 ( RUN 02 )  
 ( 15 APR 75 )  
 ( PAGE 25 )

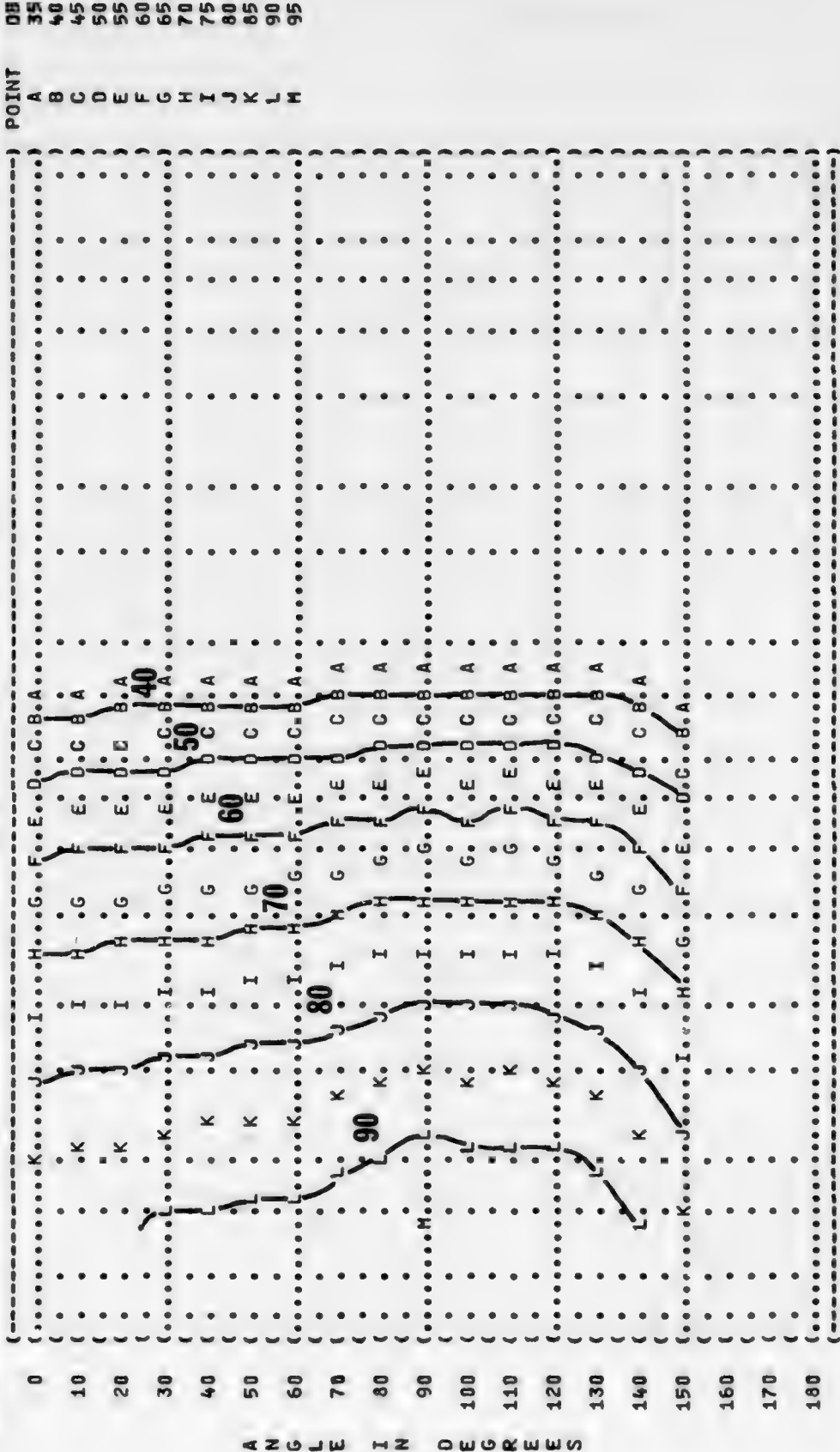


IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-010  
 RUN 02  
 15 APR 75  
 PAGE 26

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

OPERATION:  
 90% RPM ENGINE NO. 4  
 IDLE POWER  
 61% RPM ALL OTHER ENGINES  
 FREE FLOW

NOISE SOURCE/SUBJECT:  
 B-52G AIRCRAFT  
 J57-43M ENGINE  
 FAR FIELD NOISE



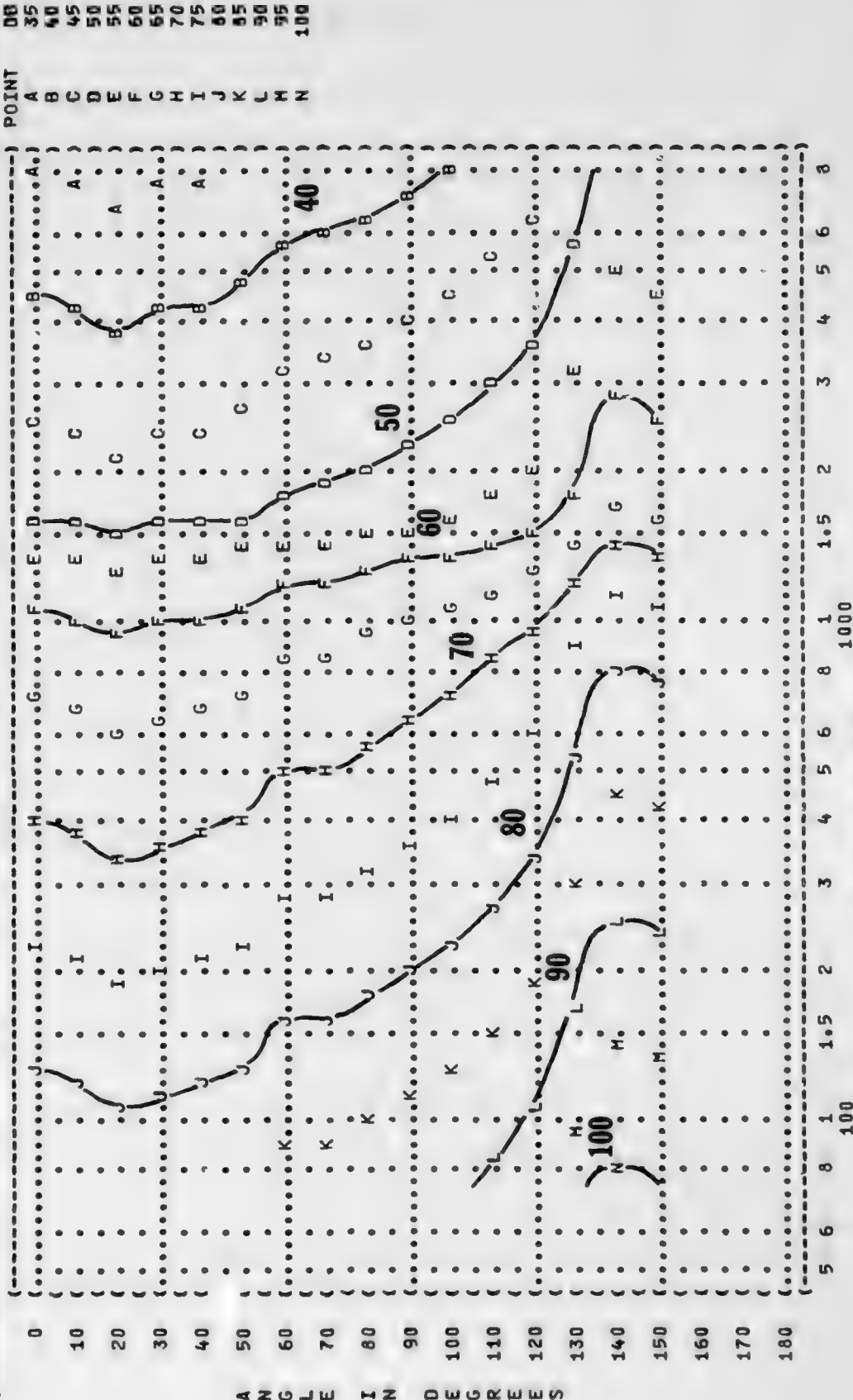
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 A  
 B  
 C  
 D  
 E  
 F  
 G  
 H  
 I  
 J  
 K  
 L  
 H

DB  
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 40  
 45  
 50  
 55  
 60  
 65  
 70  
 75  
 80  
 85  
 90  
 95

5 6 8 1 1.5 2 3 4 5 6 8  
 100 1000  
 DISTANCE FROM SOURCE (METERS)

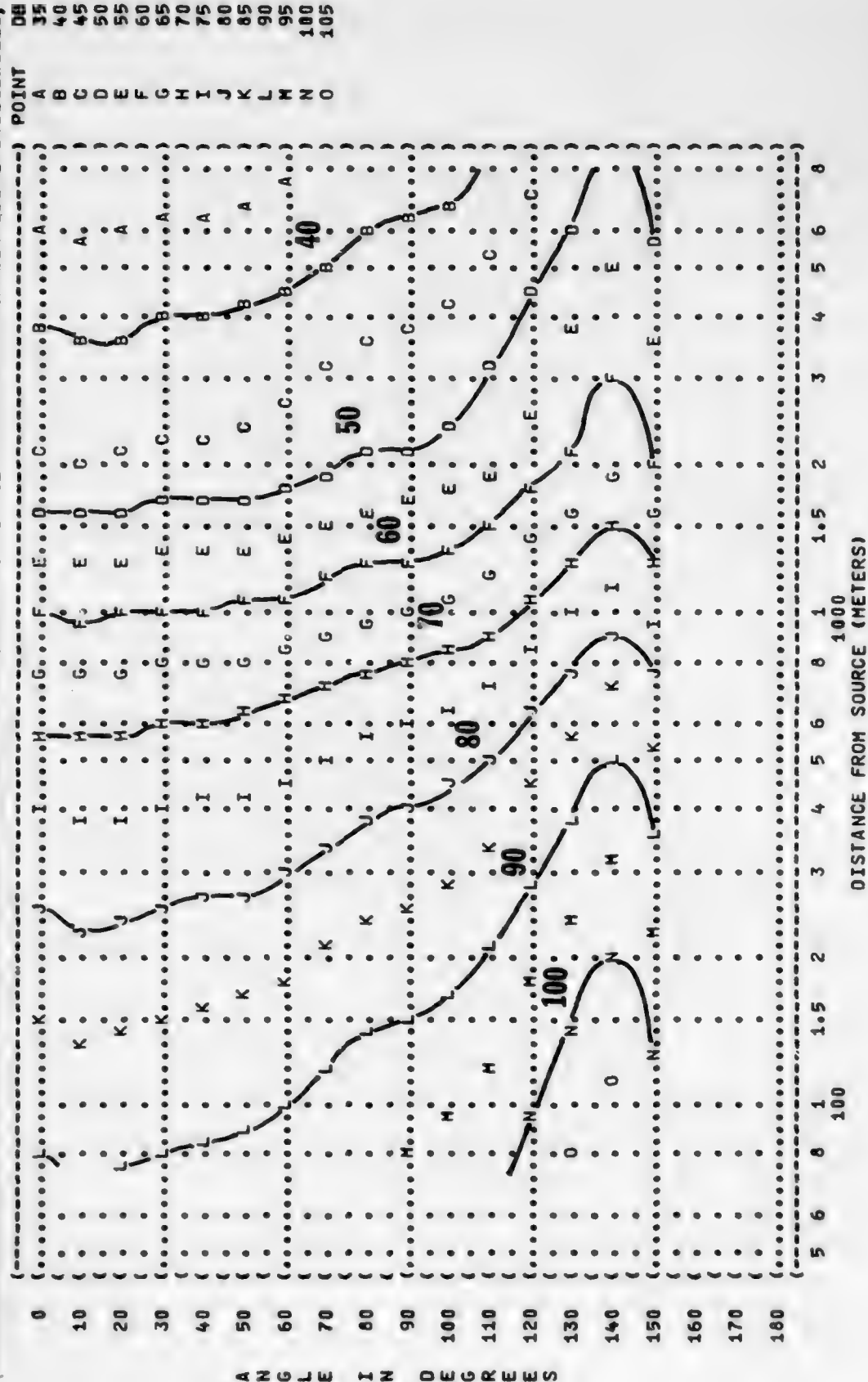


( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 31.5 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( B-52G AIRCRAFT ( 80% RPM  
 ( J57-43W ENGINE ( ALL ENGINES  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY: ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( RUN 03  
 ( 15 APR 75  
 ( PAGE 18  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 (



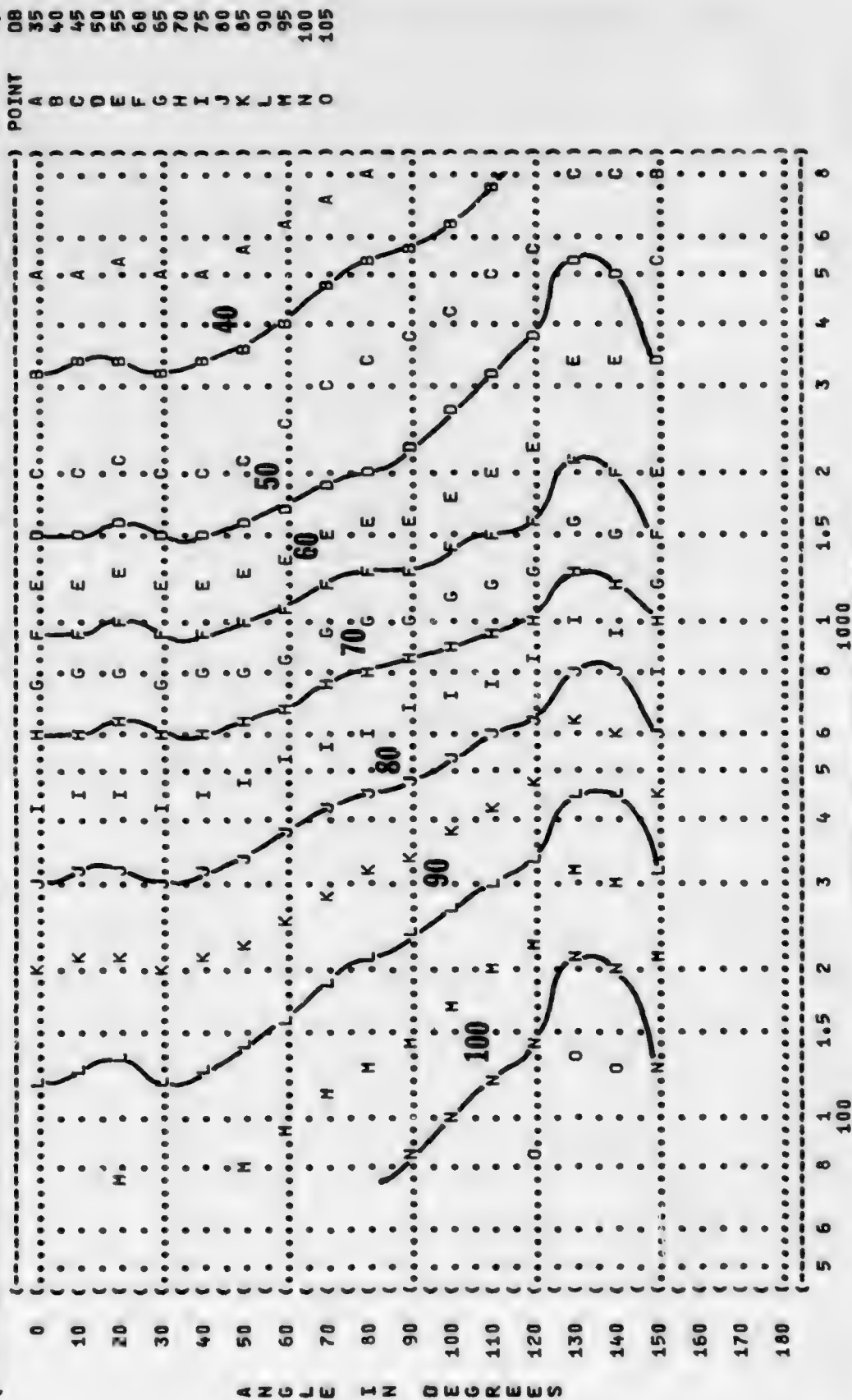
DISTANCE FROM SOURCE (METERS)

( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 63 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( OPERATION:  
 ( 80% RPM  
 ( ALL ENGINES  
 ( FREE FLOW  
 ( B-52G AIRCRAFT  
 ( J57-43M ENGINE  
 ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 ( RUN 03  
 ( 15 APR 75  
 ( PAGE 19



A N G L E I N D E G R E E S

( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 125 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( ( OPERATION:  
 ( ( 80% RPM  
 ( ( J57-43W ENGINE  
 ( ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 ( RUN 03  
 ( 15 APR 75  
 ( PAGE 20

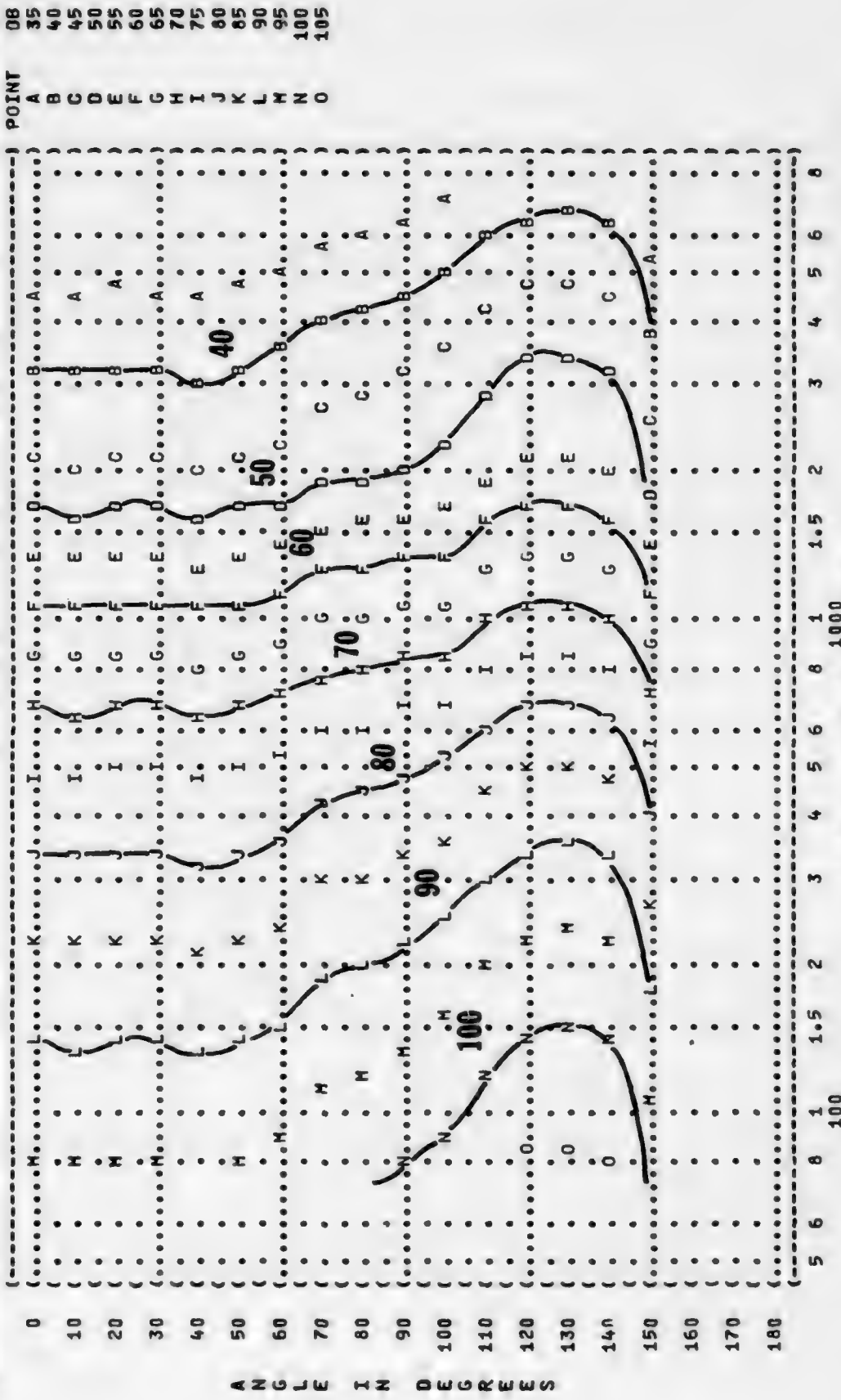


IDENTIFICATION: 11  
 OMEGA 1.4  
 TEST 75-002-010  
 RUN 03  
 15 APR 75  
 PAGE 21

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

NOISE SOURCE/SUBJECT: 1  
 OPERATION: 1  
 80% RPM  
 ALL ENGINES  
 FREE FLOW

B-52G AIRCRAFT  
 J57-43W ENGINE  
 FAR FIELD NOISE



DISTANCE FROM SOURCE (METERS)

ANGLE IN DEGREES

FIGURE 11 SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:

B-52G. AIRCRAFT  
J57-43M ENGINE  
FAR FIELD NOISE

OPERATION:

80% RPM  
ALL ENGINES  
FREE FLOW

METEOROLOGY:

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

IDENTIFICATION:

OMEGA 1.4

TEST 75-002-010

RUN 03

15 APR 75

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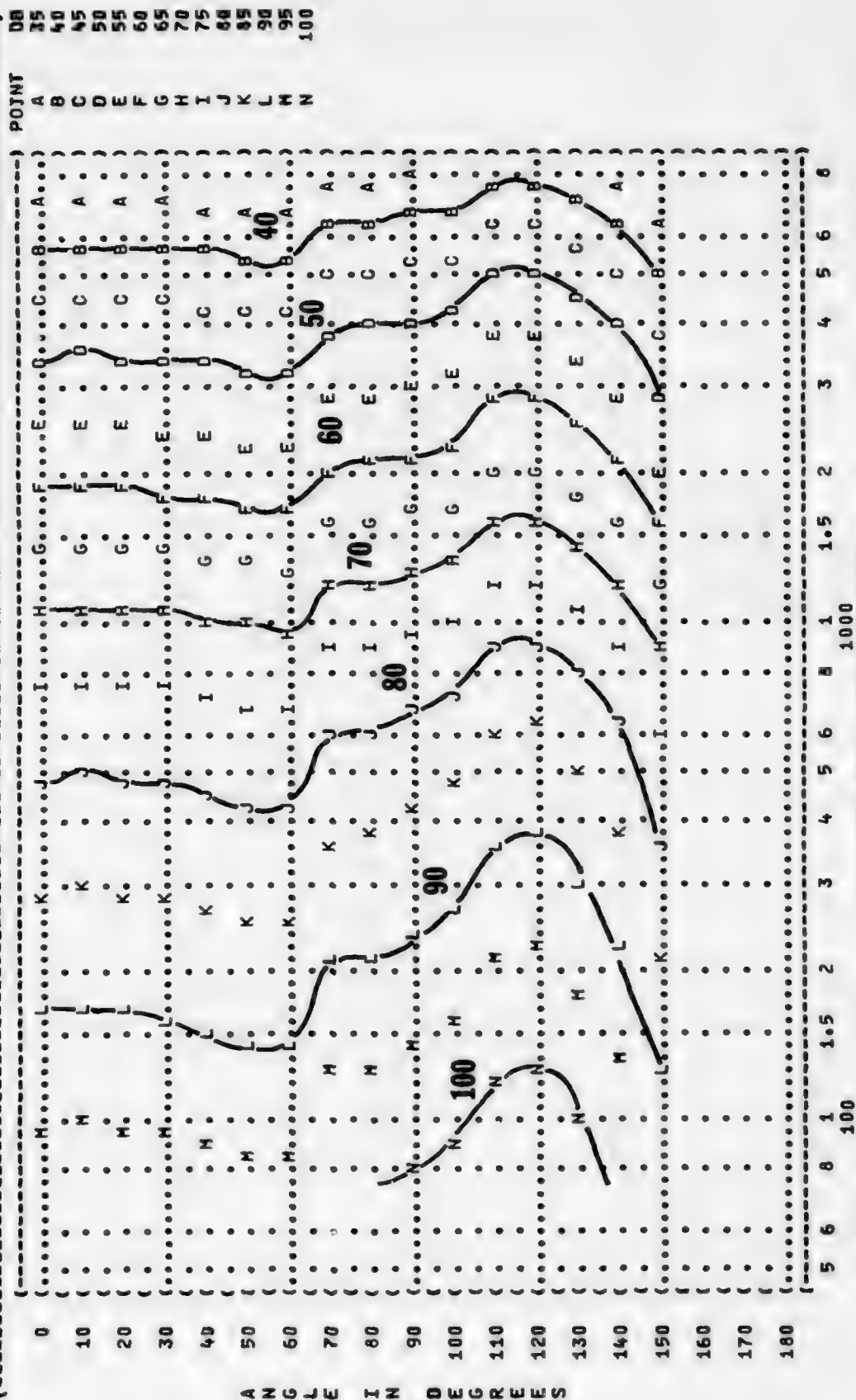


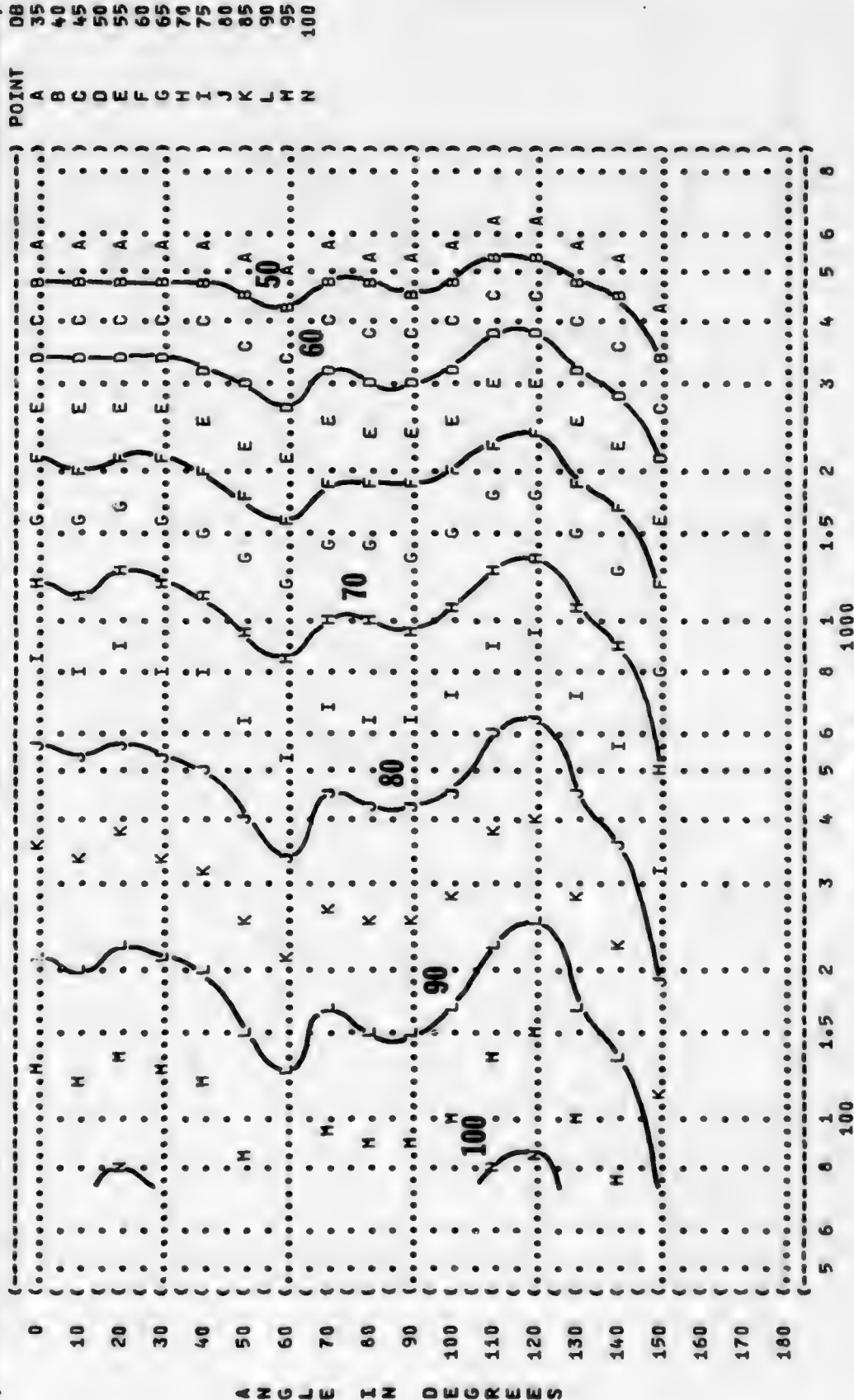
FIGURE: SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
1000 HZ OCTAVE BAND

11

IDENTIFICATION:  
OMEGA 1.4  
TEST 75-002-010  
RUN 03  
METEOROLOGY:  
TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %  
15 APR 75  
PAGE 23

NOISE SOURCE/SUBJECT:  
OPERATION:  
80% RPM  
ALL ENGINES  
FREE FLOW

B-52G AIRCRAFT  
J57-43M ENGINE  
FAR FIELD NOISE



A N G L E I N D E G R E E S

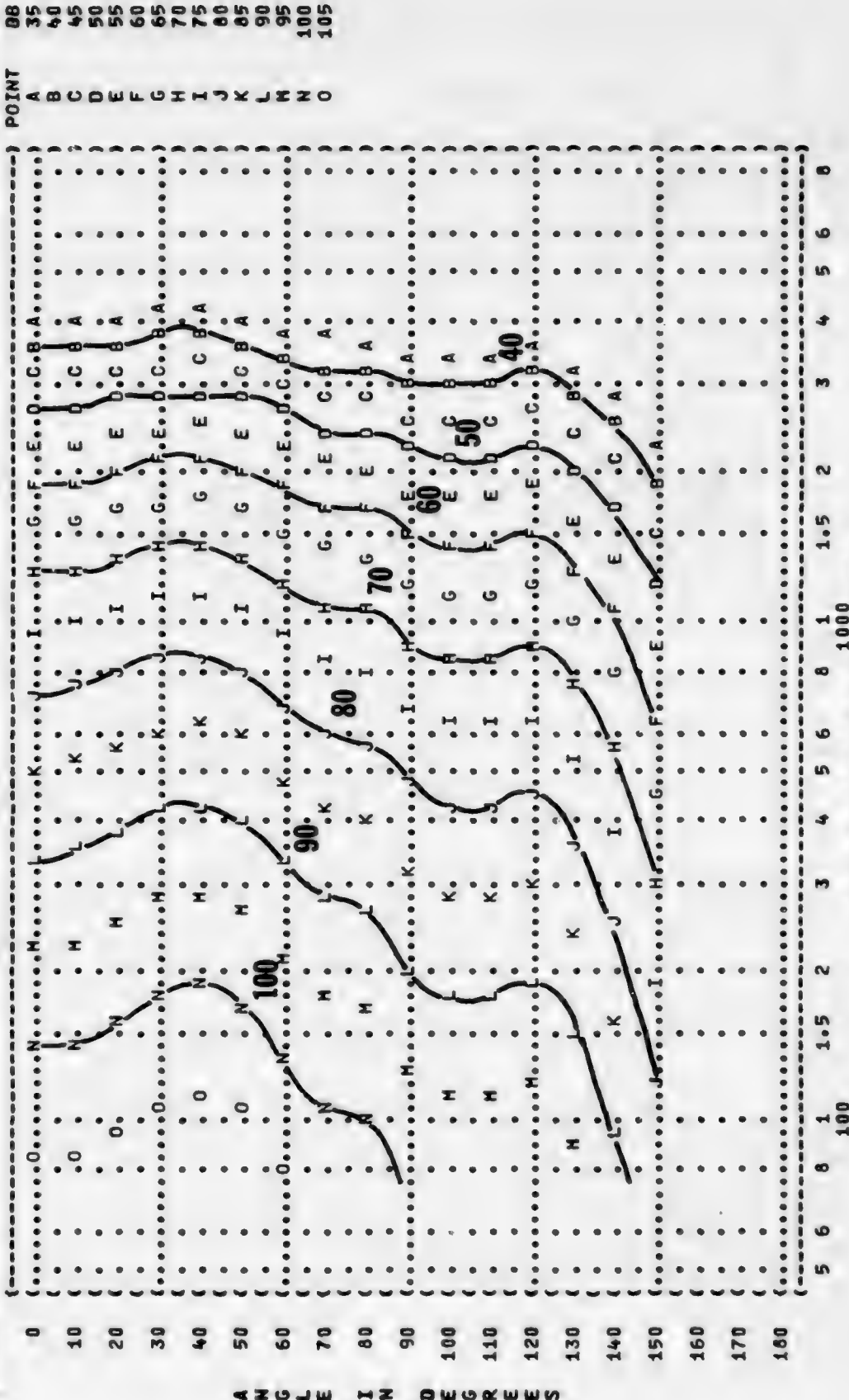


IDENTIFICATION: OMEGA 1.4  
 TEST 75-002-010  
 RUN 03  
 15 APR 75  
 PAGE 24

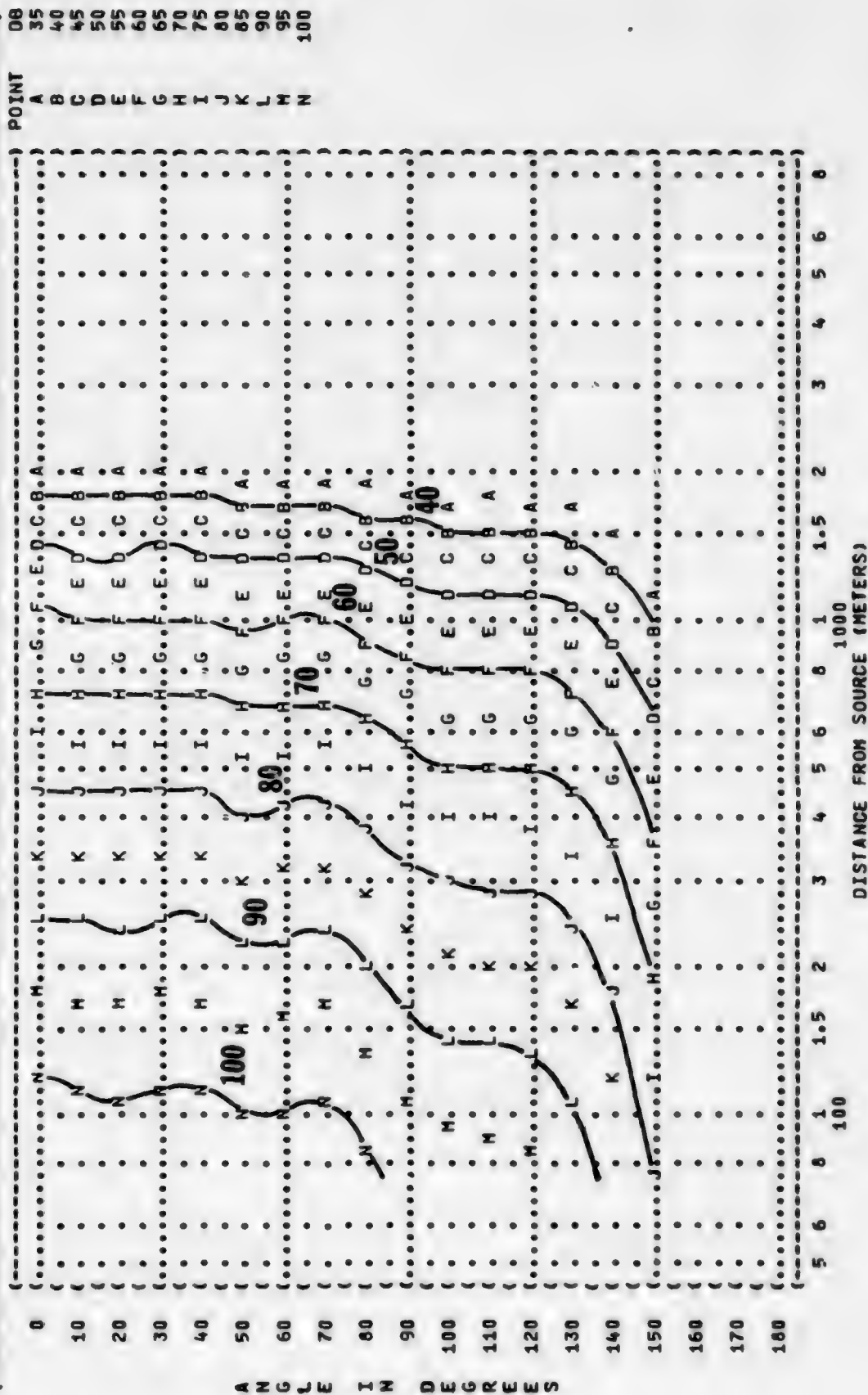
METEOROLOGY: TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

OPERATION: 80% RPM  
 ALL ENGINES  
 FREE FLOW

NOISE SOURCE/SUBJECT: 8-52G AIRCRAFT  
 J57-43M ENGINE  
 FAR FIELD NOISE



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(-----)
( FIGURE: SOUND PRESSURE LEVEL {SPL} ) IDENTIFICATION: )
( EQUAL LEVEL CONTOURS (DB) ) )
( 11 ) OMEGA 1.4 )
( 4000 HZ OCTAVE BAND ) TEST 75-002-010 )
( NOISE SOURCE/SUBJECT: ) METEOROLOGY: ) RUN 03 )
( ) TEMP = 15 C ) )
( B-52G AIRCRAFT ) BAR PRESS = .760 M HG ) 15 APR 75 )
( J57-43M ENGINE ) ALL ENGINES ) )
( FAR FIELD NOISE ) FREE FLOW ) PAGE 25 )
(-----)
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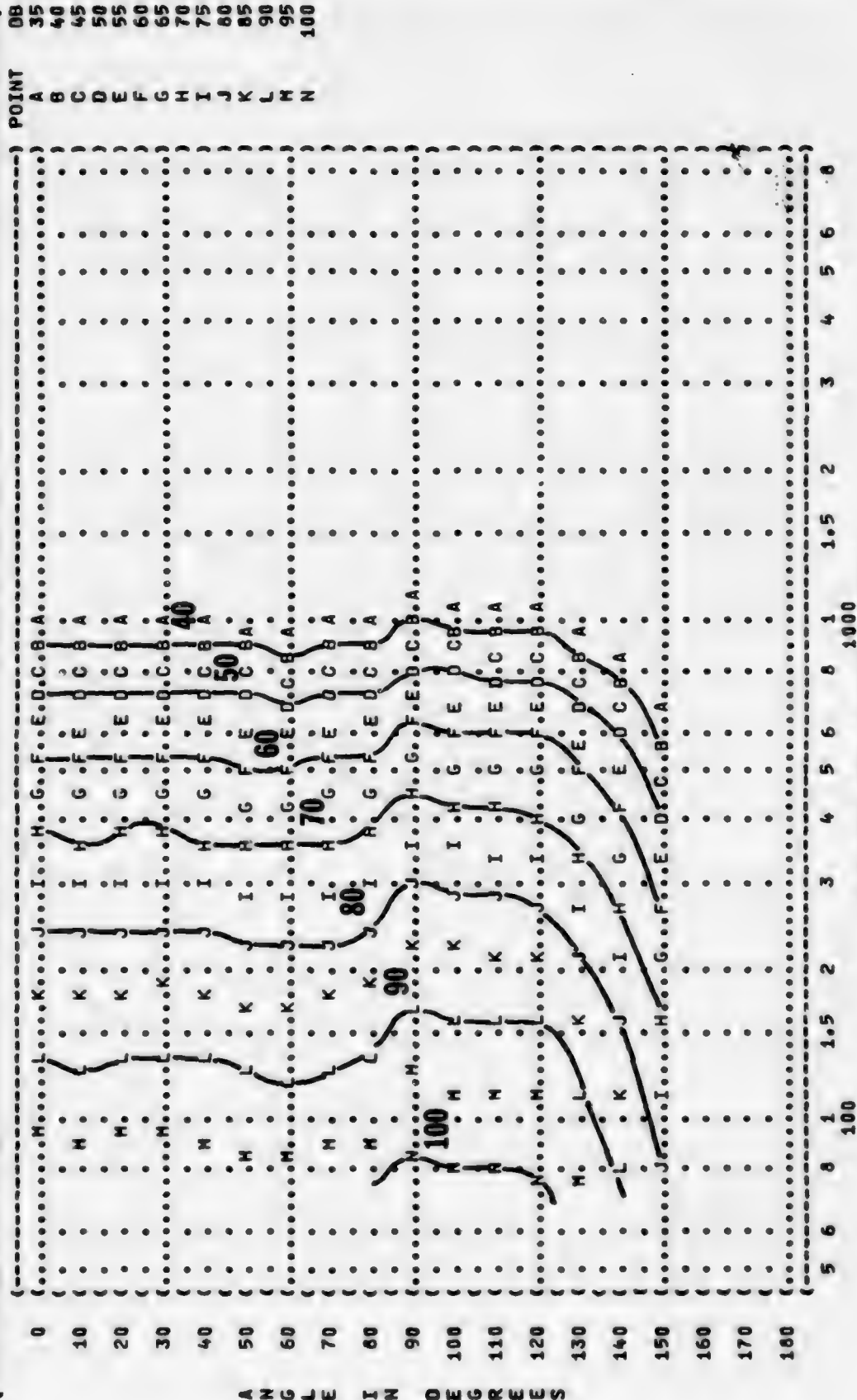


IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-002-010  
 RUN 03  
 15 APR 75  
 PAGE 26

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 H HG  
 REL HUMID = 70 %

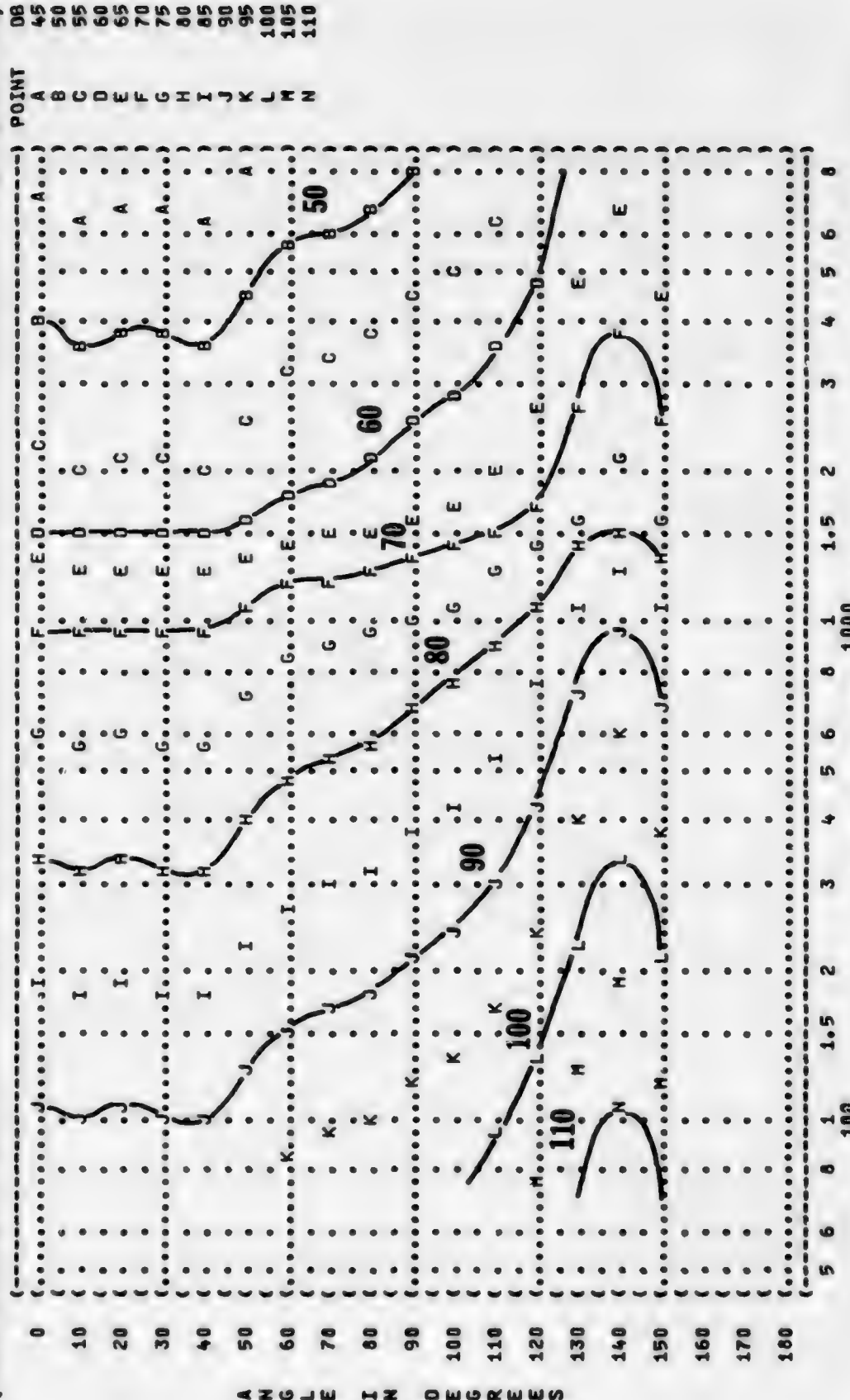
OPERATION:  
 80% RPM  
 ALL ENGINES  
 FREE FLOW

NOISE SOURCE/SUBJECT:  
 B-52G AIRCRAFT  
 J57-43M ENGINE  
 FAR FIELD NOISE



DISTANCE FROM SOURCE (METERS)

( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 31.5 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( ( 90% RPM  
 ( ( ( ALL ENGINES  
 ( ( ( FREE FLOW  
 ( NOISE SOURCE/SUBJECT: ( METEOROLOGY:  
 ( ( ( TEMP = 15 C  
 ( ( ( BAR PRESS = .760 M HG  
 ( ( ( REL HUMID = 70 %  
 ( ( ( RUN 04  
 ( ( ( 15 APR 75  
 ( ( ( PAGE 18  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 ( RUN 04



IDENTIFICATION:  
OMEGA 1.4  
TEST 75-002-01

## ● METEOROLOGY:

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

**90% RPM  
ALL ENGINES  
FREE FLOW**

INT A B C D E F G H I J K L M N O P

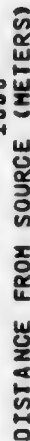

DISTANCE FROM SOURCE (METERS)



IDENTIFICATION: OMEGA 1.4

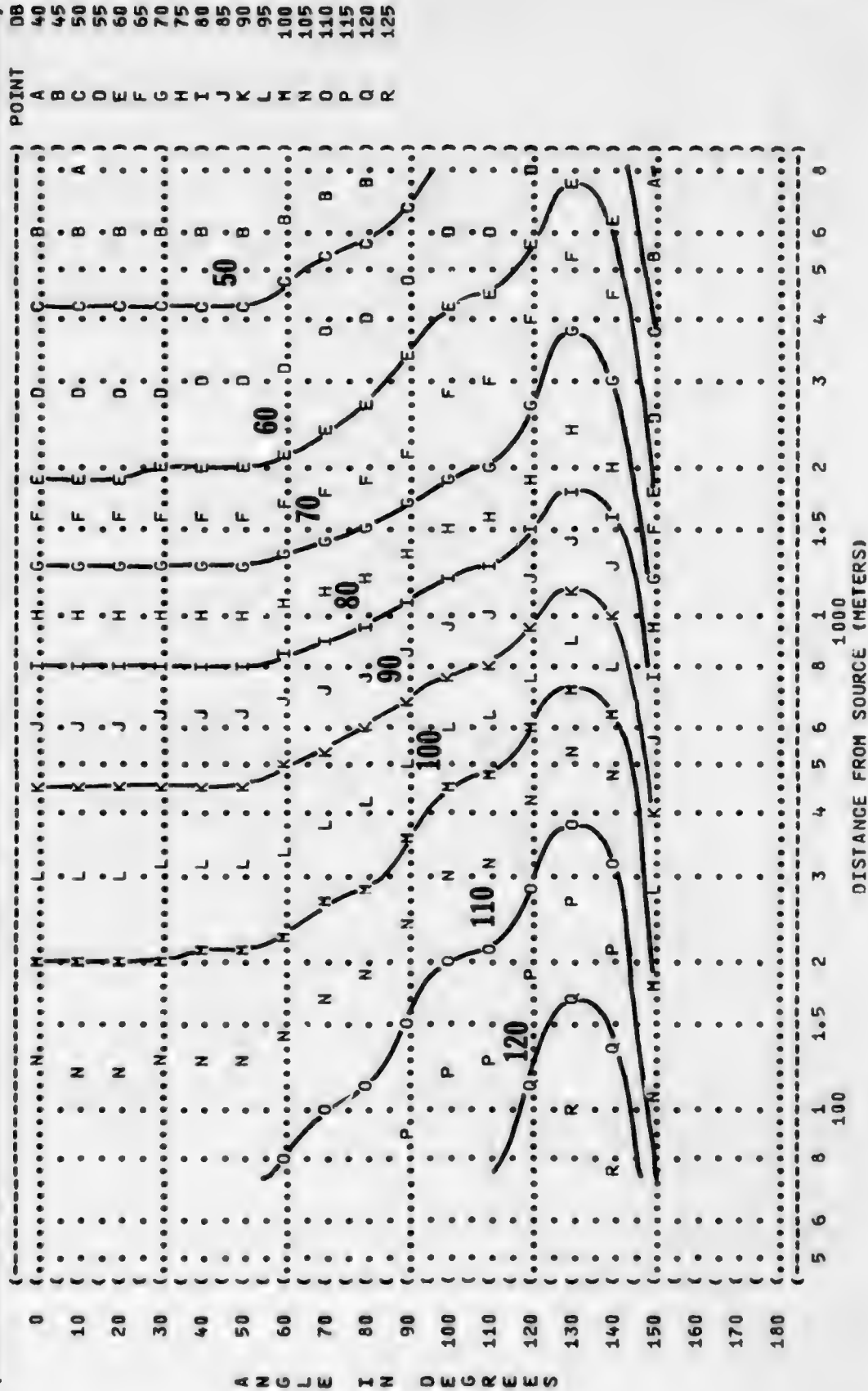
## ● METEOROLOGY:

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

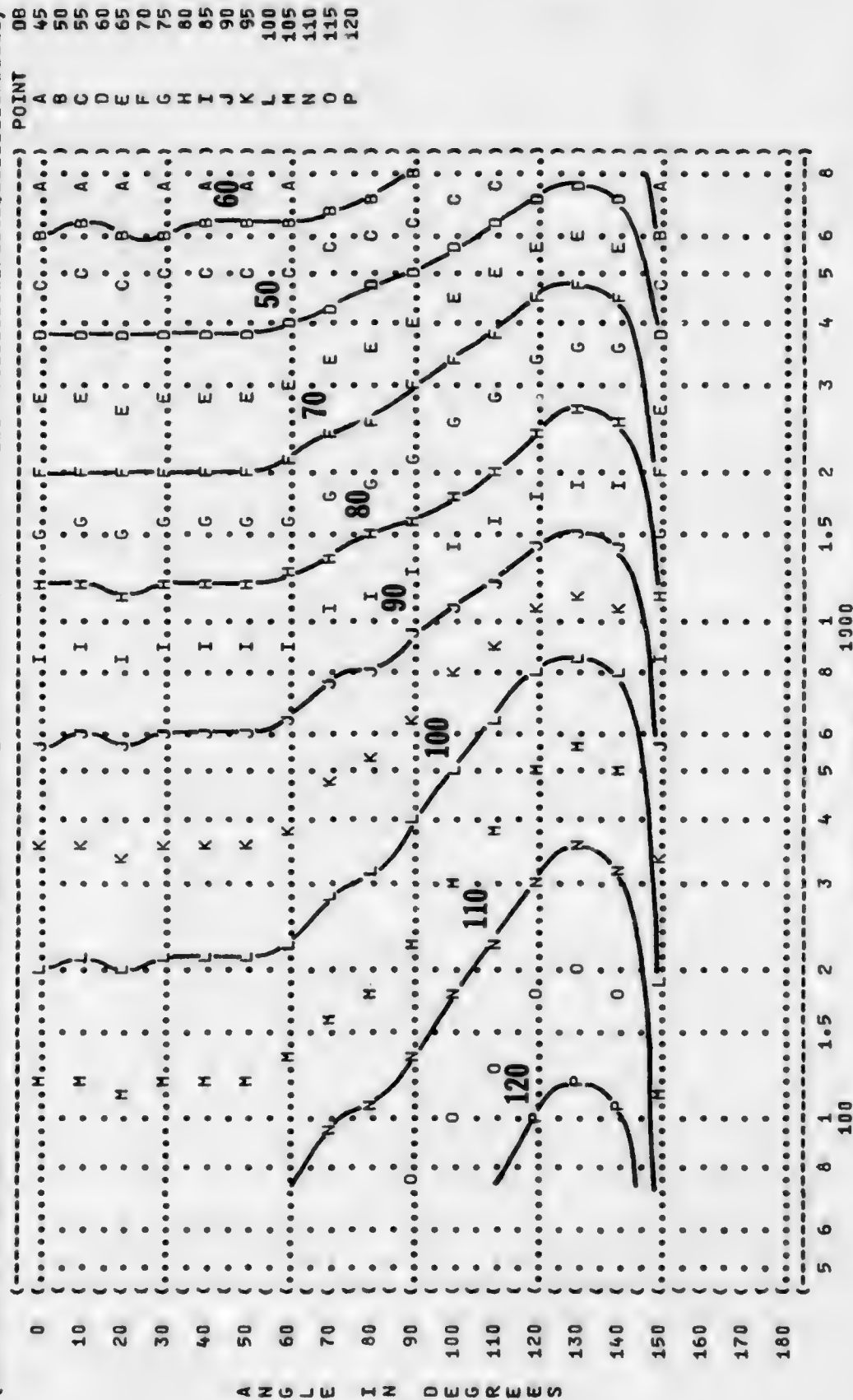




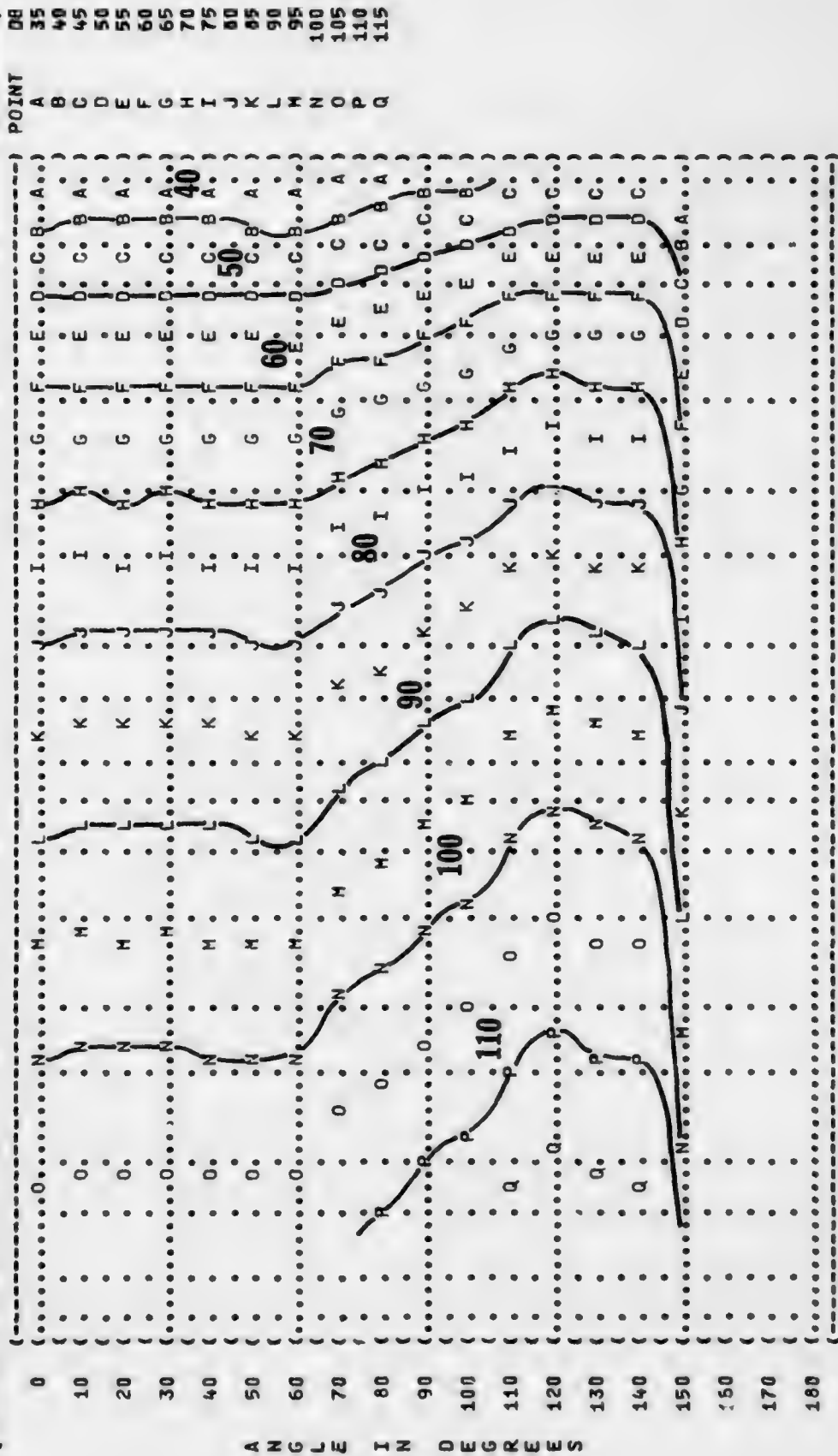
( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 250 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( B-52G AIRCRAFT ( 90% RPM  
 ( J57-43M ENGINE ( ALL ENGINES  
 ( FAR FIELD NOISE ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 ( RUN 04  
 ( 15 APR 75  
 ( PAGE 21



( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( 11 EQUAL LEVEL CONTOURS (DB) )  
 ( 500 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( OPERATION: )  
 ( B-52G AIRCRAFT )  
 ( J57-43N ENGINE )  
 ( FAR FIELD NOISE )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( 15 APR 75 )  
 ( RUN 04 )  
 ( PAGE 22 )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-002-010 )

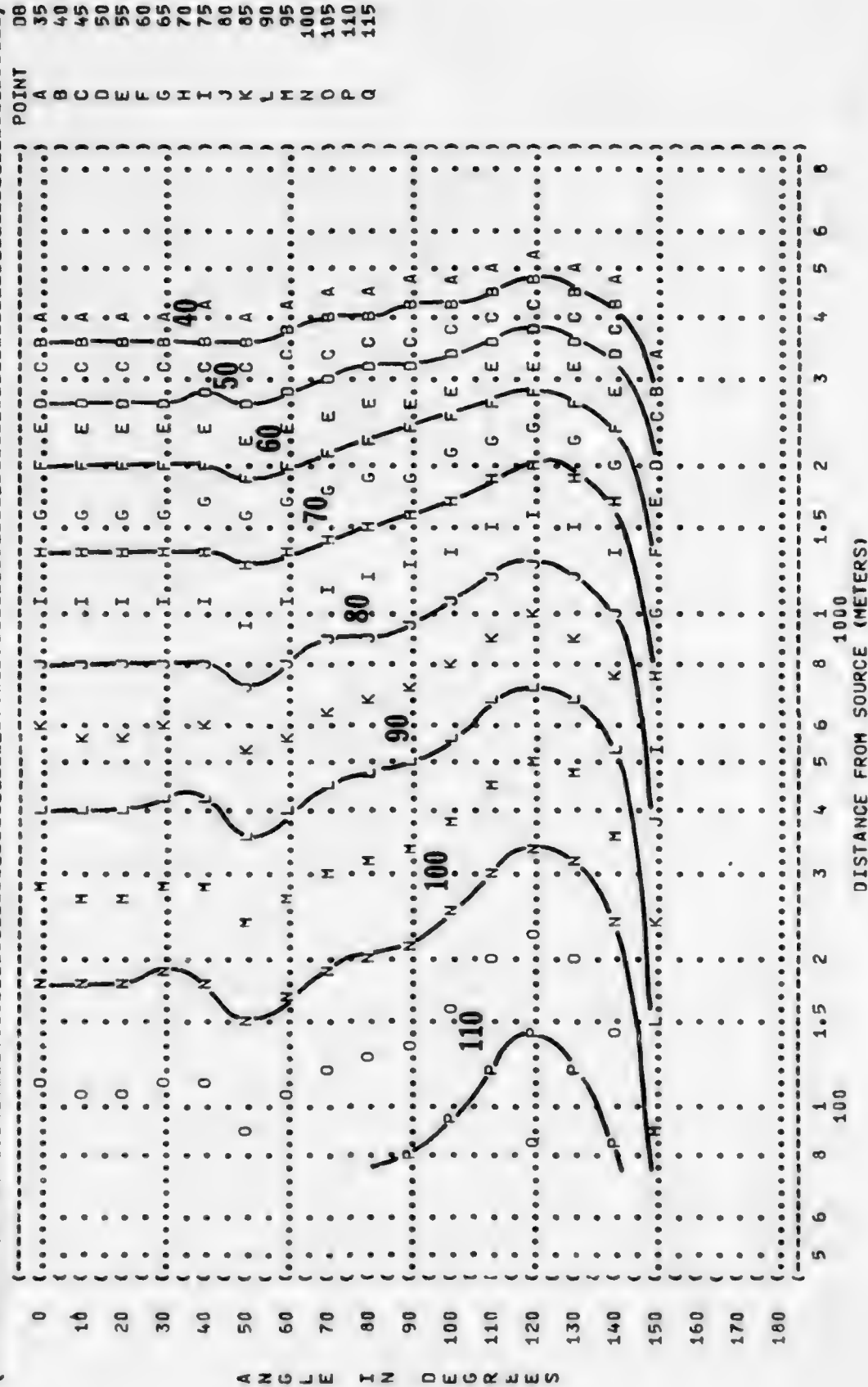


( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 1000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( ( OPERATION:  
 ( ( 90% RPM  
 ( ( ALL ENGINES  
 ( ( FREE FLOW  
 ( B-52G AIRCRAFT  
 ( J57-43M ENGINE  
 ( FAR FIELD NOISE  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 ( RUN 04  
 ( 15 APR 75  
 ( PAGE 23



A N G L E I N D E G R E E S

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(-----)
( FIGURE: SOUND PRESSURE LEVEL (SPL) ) IDENTIFICATION: )
(    11      EQUAL LEVEL CONTOURS (DB) ) )
(    2000 HZ OCTAVE BAND ) )
( ) )
( ) )
( NOISE SOURCE/SUBJECT: ) METEOROLOGY: )
( ) ) TEMP = 15 C )
( B-52G AIRCRAFT ) BAR PRESS = .760 M HG )
( J57-43W ENGINE ) ALL ENGINES ) 15 APR 75 )
( FAR FIELD NOISE ) FREE FLOW ) )
( ) ) PAGE 24 )
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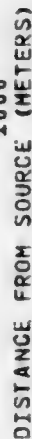


IDENTIFICATION:  
OMEGA 1.4  
TEST 75-002-010  
RUN 04

## METEOROLOGY:

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

PAGE 25



08	POINT
35	A
40	B
45	C
50	D
55	E
60	F
65	G
70	H
75	I
80	J
85	K
90	L
95	M
100	N
105	O

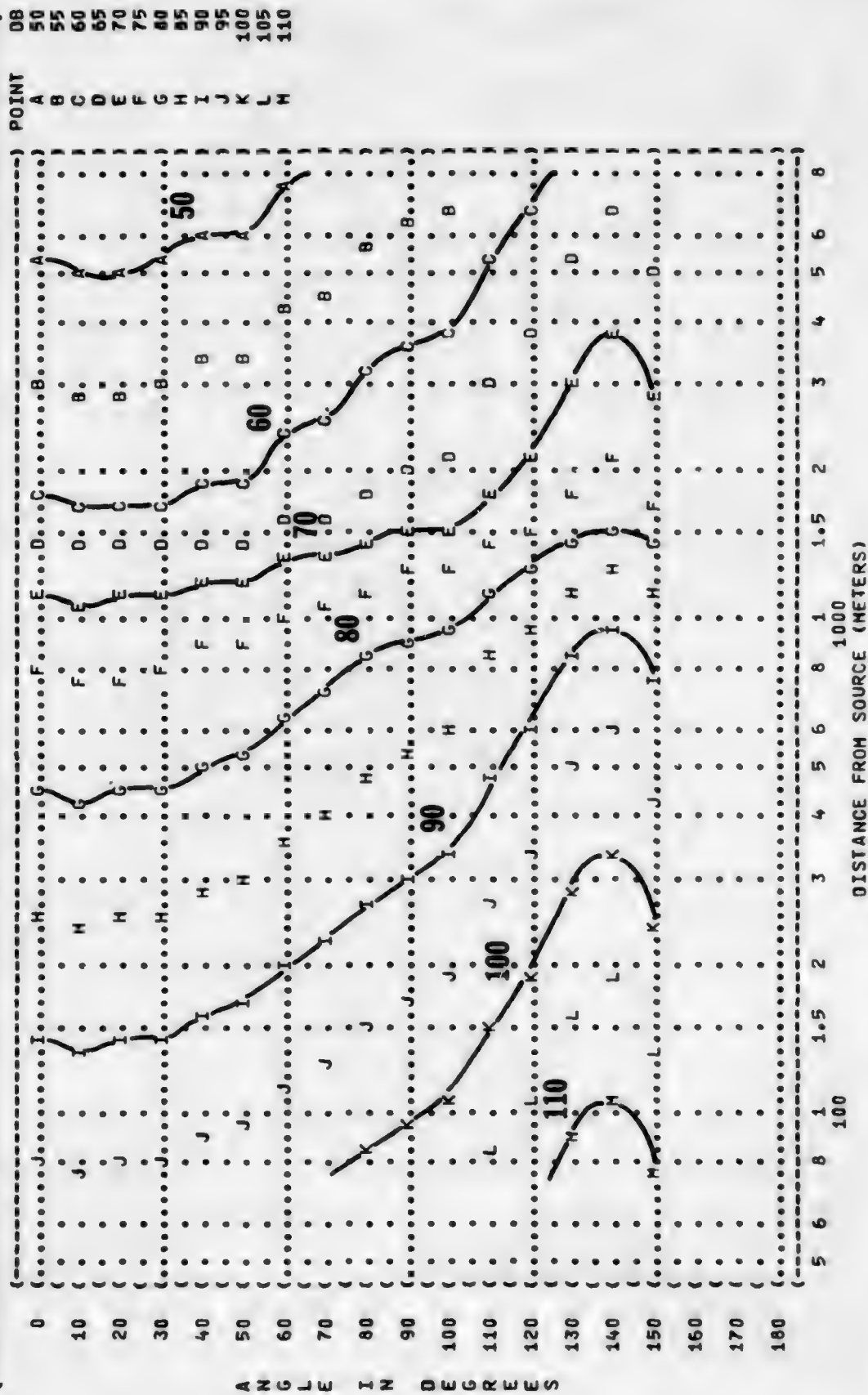
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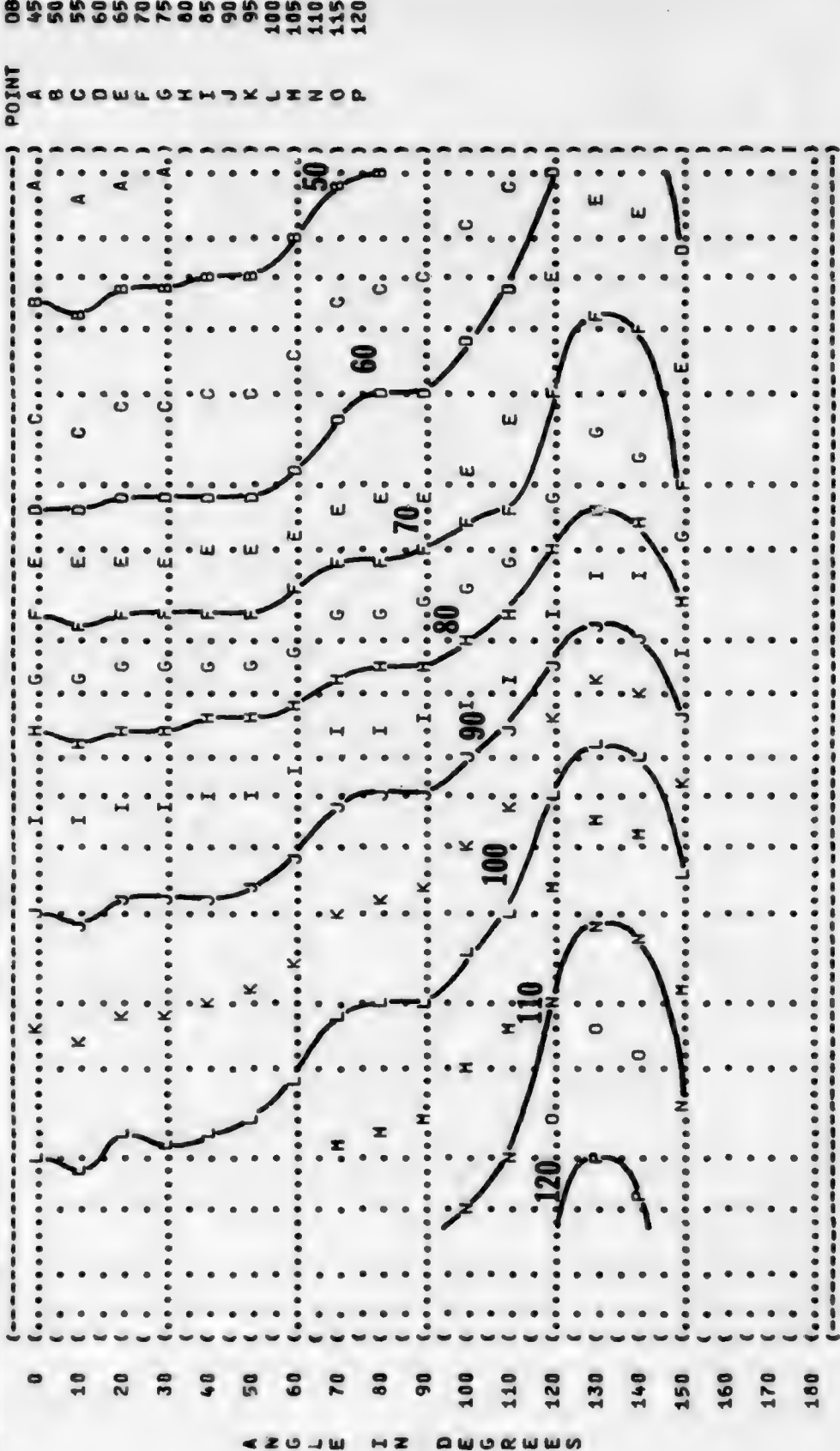
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( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 31.5 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( ( OPERATION:  
 ( ( MILITARY POWER  
 ( ( 8-52G AIRCRAFT  
 ( ( 94% RPM  
 ( ( J57-43W ENGINE  
 ( ( ALL ENGINES  
 ( ( FAR FIELD NOISE  
 ( ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 ( RUN 05  
 ( 15 APR 75  
 ( PAGE 18



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 63 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( 8-52G AIRCRAFT  
 ( J57-43M ENGINE  
 ( FAR FIELD NOISE  
 ( OPERATION:  
 ( MILITARY POWER  
 ( 94% RPM  
 ( ALL ENGINES  
 ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 ( RUN 05  
 ( 15 APR 75  
 ( PAGE 19



0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180  
 5 6 8 1 1.5 2 3 4 5 6 8  
 1000  
 100  
 DISTANCE FROM SOURCE (METERS)

A N G L E I N D E G R E E S

IDENTIFICATION: OMEGA 1.4

**OMEGA 1.4**

**METEOROLOGY:**

TEMP = 15 C  
BAR PRESS = .760 H HG  
REL HUMID = 70 %

15 APR 75  
PAGE 20

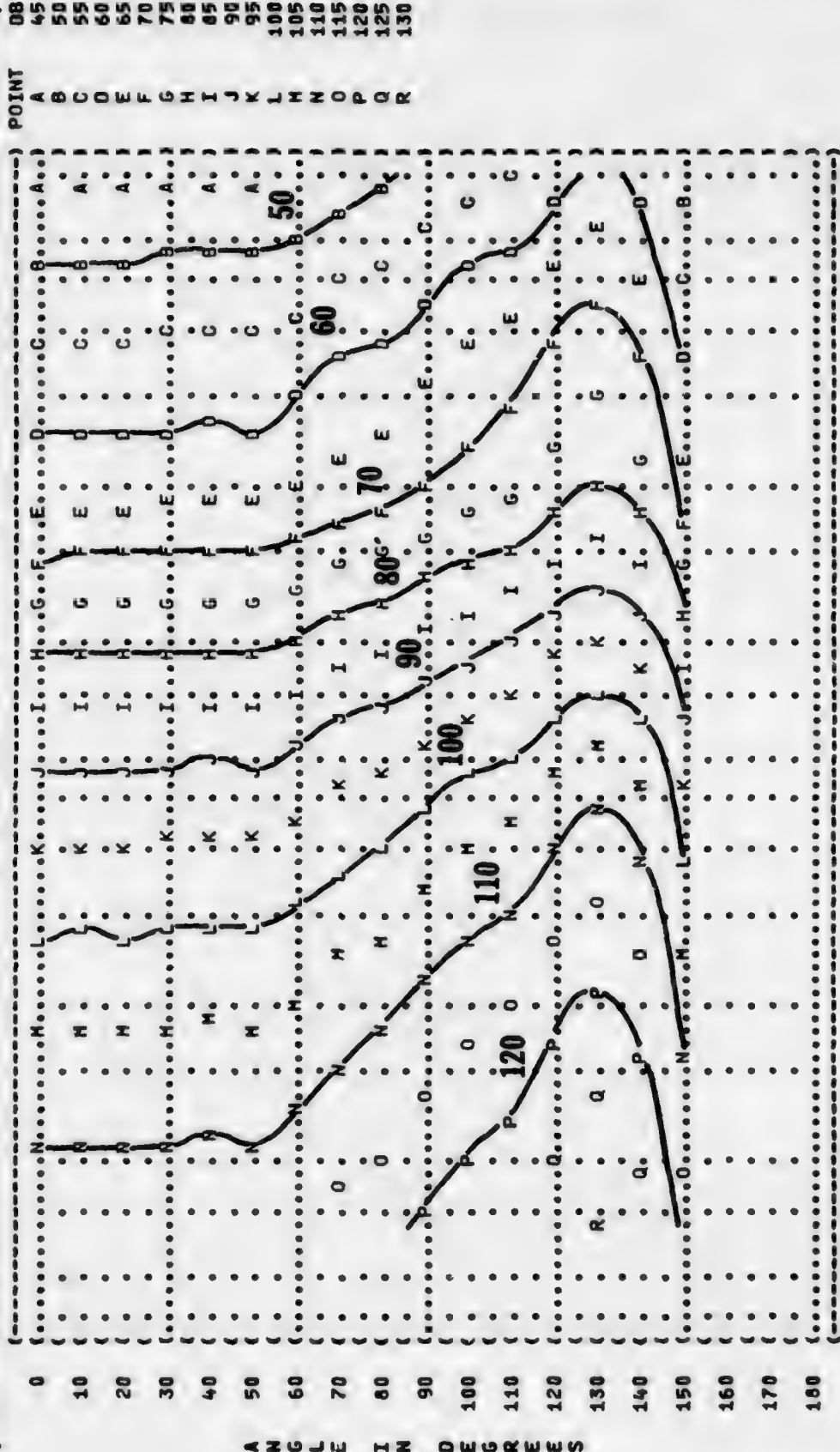


IDENTIFICATION: OMEGA 1.4  
 TEST 75-002-010  
 RUN 05  
 15 APR 75  
 PAGE 21

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

OPERATION:  
 MILITARY POWER  
 94% RPM  
 ALL ENGINES  
 FREE FLOW

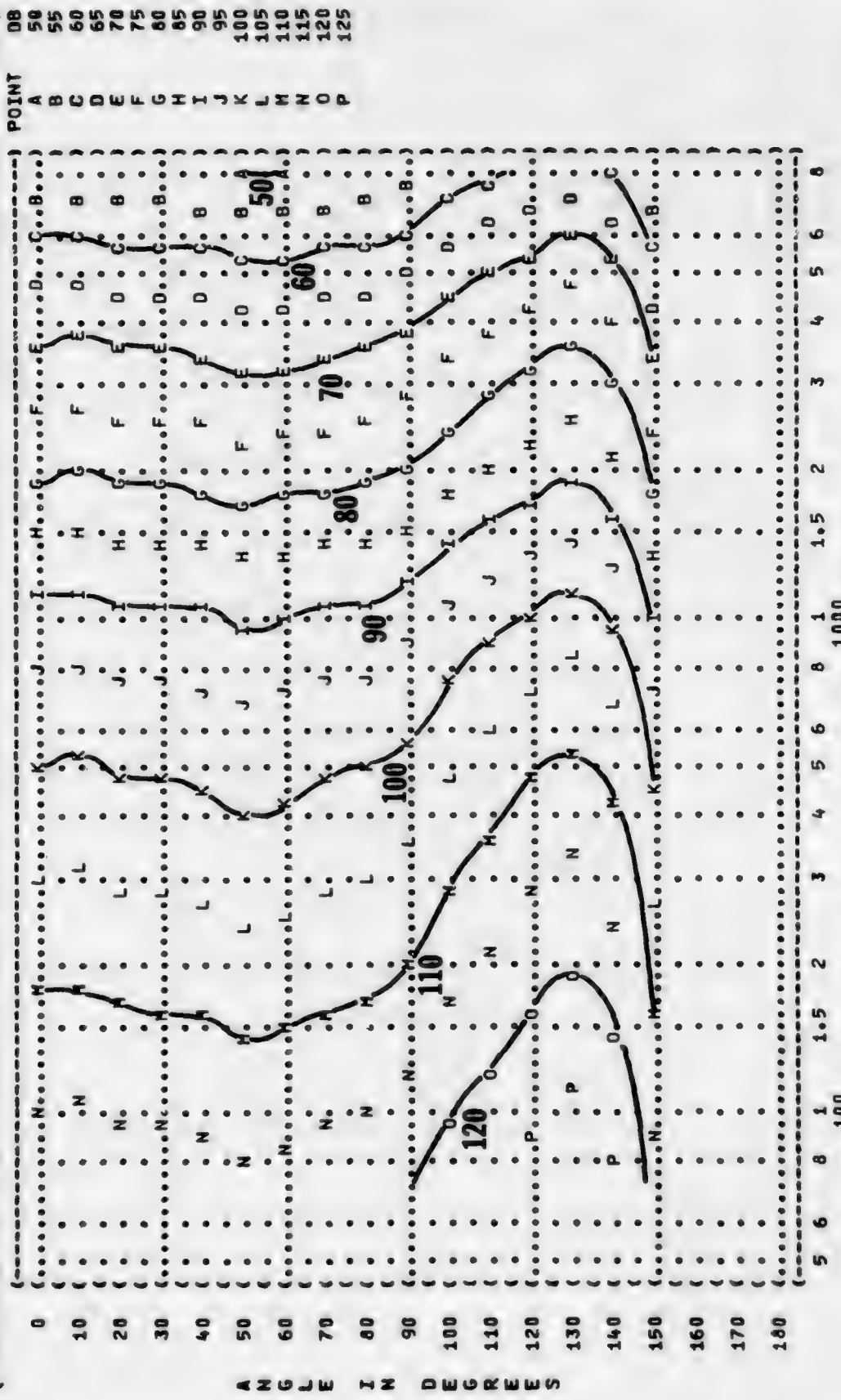
NOISE SOURCE/SUBJECT:  
 8-52G AIRCRAFT  
 J57-43M ENGINE  
 FAR FIELD NOISE



POINT DB  
 A 45  
 B 50  
 C 55  
 D 60  
 E 65  
 F 70  
 G 75  
 H 80  
 I 85  
 J 90  
 K 95  
 L 100  
 M 105  
 N 110  
 O 115  
 P 120  
 Q 125  
 R 130

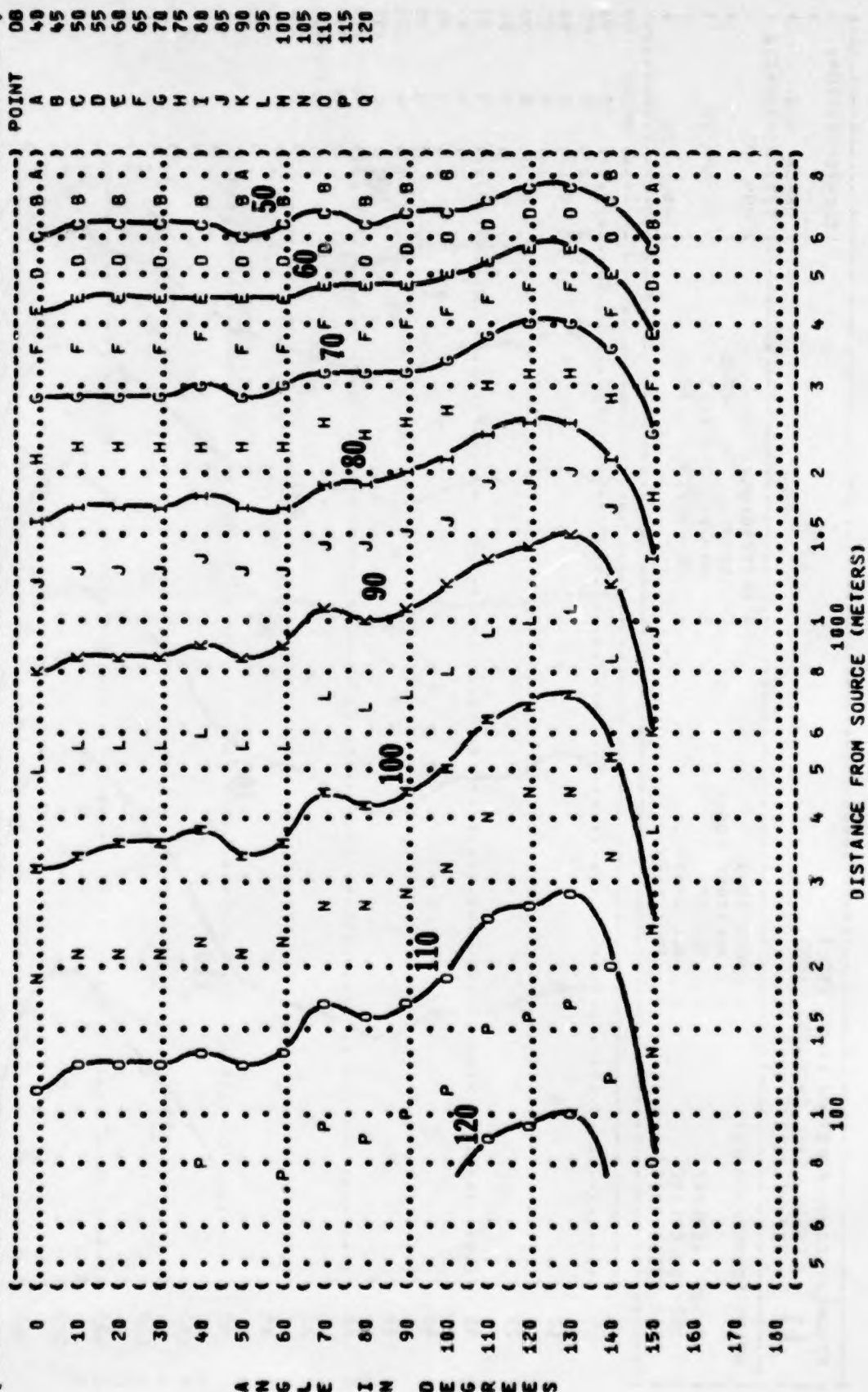
DISTANCE FROM SOURCE (METERS)  
 5 6 8 1 1.5 2 3 4 5 6 8 100 1000

( ( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( ( 500 HZ OCTAVE BAND  
 ( ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( 8-52G AIRCRAFT ( MILITARY POWER  
 ( ( J57-43M ENGINE ( 94% RPM  
 ( ( FAR FIELD NOISE ( ALL ENGINES  
 ( ( ( FREE FLOW  
 ( ( METEOROLOGY:  
 ( ( TEMP = 15 C  
 ( ( BAR PRESS = .760 M HG  
 ( ( REL HUMID = 70 %  
 ( ( IDENTIFICATION:  
 ( ( OMEGA 1.4  
 ( ( TEST 75-002-010  
 ( ( RUN 05  
 ( ( 15 APR 75  
 ( ( PAGE 22





```
(-----)
( FIGURE: SOUND PRESSURE LEVEL {SPL} )
(      11 EQUAL LEVEL CONTOURS (DB) )
(      1000 HZ OCTAVE BAND )
( )
( NOISE SOURCE/SUBJECT: )
( )
( ) OPERATION: )
( ) MILITARY POWER )
( ) 94% RPM )
( ) ALL ENGINES )
( ) FREE FLOW )
( ) METEOROLOGY: )
( ) TEMP = 15 C )
( ) BAR PRESS = .760 M HG )
( ) REL HUMID = 70 % )
( ) )
( IDENTIFICATION: )
( ) )
( OMEGA 1.4 )
( TEST 75-002-010 )
( RUN 05 )
( )
( ) 15 APR 75 )
( ) )
( ) PAGE 23 )
(-----)
```





### IDENTIFICATION:

11

2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:

**B-52G AIRCRAFT**

**J57-43W ENGINE**

## FAR FIELD NOISE

**( OPERATION:**

## MILITARY POWER

94% RPM

**ALL ENGINES**

**FREE FLOW**

## MEVEOROLGY:

TEMP = 15 C

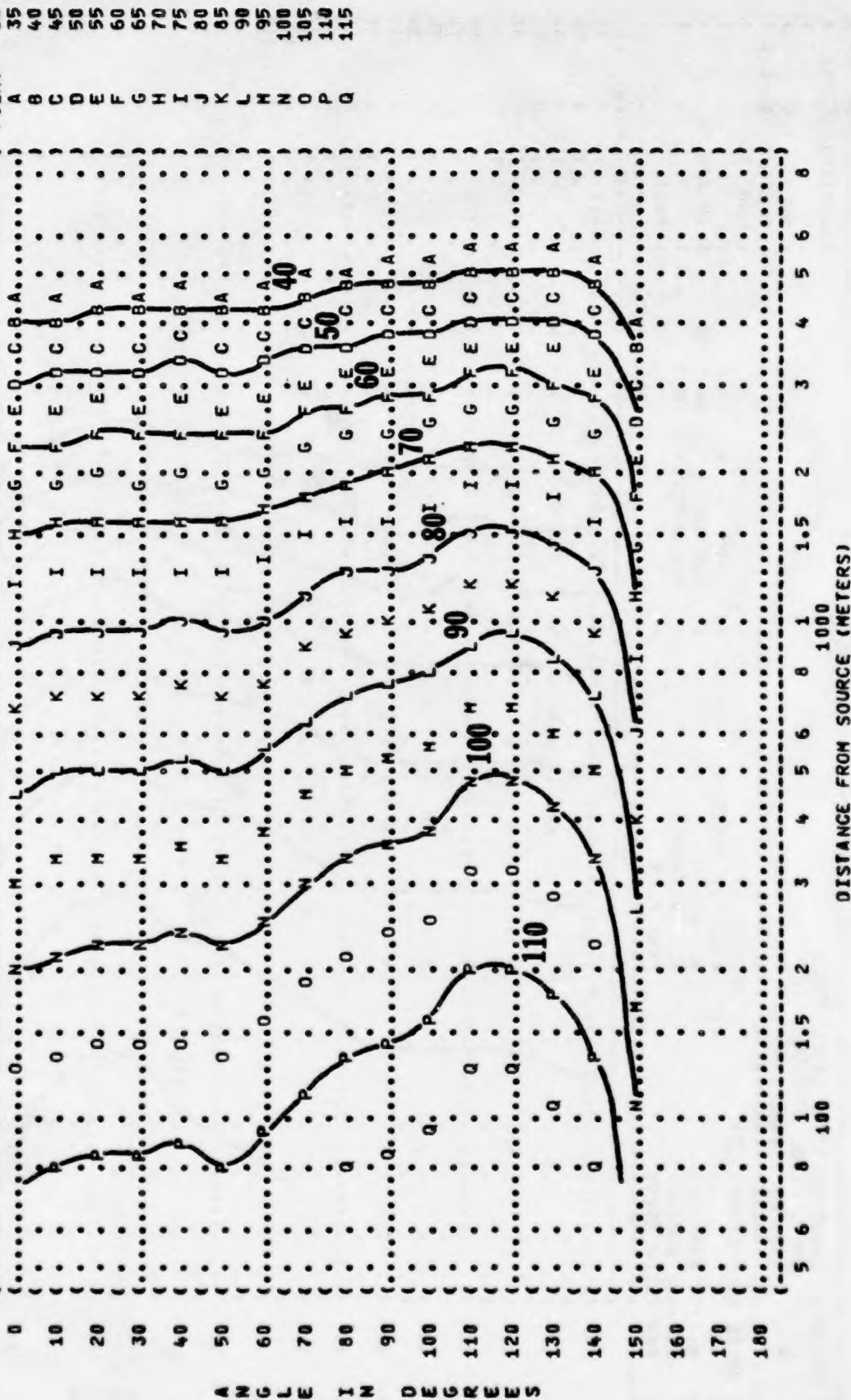
BAR PRESS = .760 M HG

REL HUMID = 70 %

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## POINT

80



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 4000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( B-52G AIRCRAFT  
 ( J57-43M ENGINE  
 ( FAR FIELD NOISE  
 ( OPERATION:  
 ( MILITARY POWER  
 ( 94% RPM  
 ( ALL ENGINES  
 ( FREE FLOW  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-002-010  
 ( RUN 05  
 ( 15 APR 75  
 ( PAGE 25

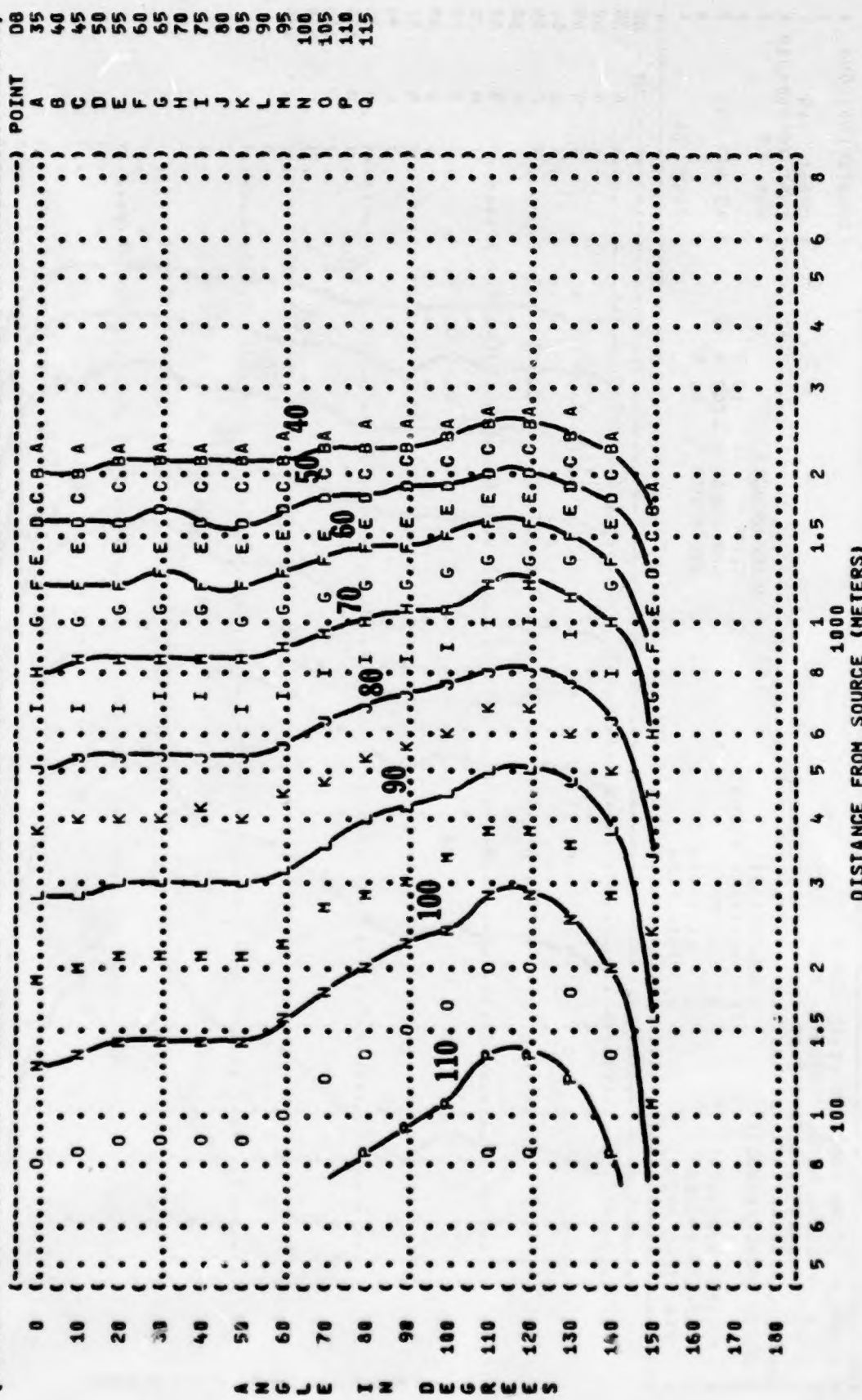


FIGURE 1: SOUND PRESSURE LEVEL (SPL)  
 11 EQUAL LEVEL CONTOURS (DB)  
 8000 HZ OCTAVE BAND

IDENTIFICATIONS:  
 OMEGA 1.4  
 TEST 75-002-010  
 RUN 05  
 15 APR 75  
 PAGE 26

NOISE SOURCE/SUBJECT:  
 OPERATION:  
 MILITARY POWER  
 94% RPM  
 ALL ENGINES  
 FREE FLOW

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

